

In Sudan, Talk of the South's Secession Is No Longer Taboo

By Jonathan C. Randal
Washington Post Service

KHARTOUM, Sudan — Discouraged by spreading anarchy and new reports of atrocities in a seemingly unwinnable four-year civil war, Sudanese for the first time are considering letting the animist and Christian south secede from the Arabized north.

The Sudanese press, among the freest in sub-Saharan Africa, has discussed the possibility without provoking the charges of treason that would have met such suggestions at any earlier time since Sudan became independent in 1956.

Sudan's leader, General Abdurrahman Swaridahab, who returned Sudan to democratic rule last year after the removal of Presi-

dent Gaafar Nimeiri in 1985, also discussed the issue on television recently.

"The very fact that the subject is no longer taboo or even shocking is the biggest surprise," an official said privately. "Now it's part of the political agenda along with maintaining Sudanese unity or establishing a federal system."

Such a changed approach reflects the absence of realistic peace prospects for Africa's largest country and the growing lawlessness in the south where the Sudan People's Liberation Movement is fighting not for secession, but to change the nature of power in Khartoum.

In the latest major atrocity, in late March, hundreds of southern Dinkas — perhaps as many as

1,500 — were slain at the rail center of Ed Daem in Southern Darfur Province, where 6,000 had sought refuge from the fighting to the south, according to diplomats.

Witnesses charged that police and militiamen of the Arabized Rizeq tribe herded the Dinka civilians together and opened fire, apparently in retaliation for a defeat inflicted by the rebels' predominantly Dinka Sudan People's Liberation Army. The army is the military wing of the Sudan People's Liberation Movement.

Other Dinkas died when survivors summoned by police to the railway station boarded four cars that then were set ablaze, the witnesses said.

The massacre was the latest example of the devastation allegedly

wrought in the past three years by militias armed by the government and by bandits taking advantage of the breakdown of law and order.

Some fear it could signal the spread of destabilization as Arabized nomads forced south by the Dinkas together and opened fire, apparently in retaliation for a defeat inflicted by the rebels' predominantly Dinka Sudan People's Liberation Army. The army is the military wing of the Sudan People's Liberation Movement.

Diplomats, relief workers and Sudanese officials expressed concern that anarchy had become so widespread in the south that, one specialist said, it had reached the "brink of being so out of control that even formal peace would not stop the bloodletting."

Oddly, Libya and the United States for once find themselves on the same side, with the Libyan leader, Colonel Moammar Gadhafi, supplying jet aircraft and Washington providing armored cars to the Sudanese Army.

Ethiopia has aided Colonel John Garang, the American-educated rebel leader, since the war began in 1983. Kenya and Uganda increasingly have provided logistical aid.

Recent visitors to Colonel Garang's headquarters at Boma in the southeast reported seeing crates of weapons supplied by Israel. Israel aided an earlier generation of southern rebels during the 1955-72 civil war as part of a policy to destabilize Arab governments.

Increasingly, the Sudan People's Liberation Army is fighting not so much the Sudanese Army as government-armed surrogates such as the Anyanya-2 militia recruited among the Nuer tribe, the Fertit

WORLD BRIEFS

Contreras Seen Unlikely to Gain Bases

LONDON (AP) — The U.S.-backed contra rebels are not likely to be able to establish effective bases inside Nicaragua, the International Institute for Strategic Studies said in its annual survey.

The Strategic Survey 1986-87 also said that the military capabilities of Nicaragua's leftist Sandinist government had strengthened. Indeed, with no major offensive mounted since October 1985, "the survey said, "there were perhaps as few as 2,000 contra combatants still in the country at the beginning of 1987, concentrated in one central region and attacking only lightly defended or purely civilian targets."

"Even with U.S. support, the contras are very unlikely to be able to take and hold any territory in Nicaragua where they could establish effective bases," the report said. It said the Sandinist government had tightened control over northern areas of the country.

Malaysia Rebels Surrendering to Thais

BANGKOK (AP) — About 800 guerrillas of a movement that has been fighting against Malaysia from bases in Thailand for 40 years were expected to surrender to the Thai Army in Yala Province, Thailand's southernmost region, in a two-day ceremony that began there Tuesday.

The mass defection was the largest ever by members of the outlawed Communist Party of Malaya, which has about 1,300 members, an army spokesman in the province said. The Communists have been fighting from mountain hideouts on the Thai-Malaysian border. A total of 114 guerrillas surrendered last month and the remaining were expected to surrender within a year, the spokesman said.

The insurgents accepted Thailand's offer of amnesty on the condition that they not be sent back to Malaysia. The Thai government is to set up villages for the defectors along the border and provide each with farmland, according to reports quoted by the Bangkok Post newspaper on Wednesday.

Shamir Says Early Elections Possible

PARIS (Reuters) — Prime Minister Yitzhak Shamir of Israel said Wednesday that a dispute in his coalition government over the timing of a Middle East peace conference could lead to early elections.

Mr. Shamir said at the end of an official visit to France that he was opposed to a new ballot because he believed it would damage efforts to fight Israel's high inflation rate.

The possibility of a new election was first raised by Foreign Minister Shimon Peres who, unlike Mr. Shamir, favors a Middle East peace conference under international auspices.

Somalia Seeks Famine Assistance

NAIROBI (UPI) — The government of Somalia declared a national emergency on Wednesday and called for international aid to combat famine officials say has killed 583 people.

The minister of internal affairs, Brigadier General Ahmed Saleh Abdulle, said 60 percent of Somalia's population has been affected by a serious drought.

General Abdulle said the situation would be particularly critical in the next six weeks and that people in severely affected areas would not receive food, water and medical supplies.

Lebanon Cabinet Meeting Postponed

BEIRUT (AP) — A new meeting of the Lebanese cabinet to deal with the nation's economic crisis has been postponed indefinitely, the speaker of Parliament, Hussein Husseini, announced Wednesday. The meeting had been set for Thursday.

The announcement said the postponement was "to allow more contacts at all levels so that the cabinet meeting would be successful." The phrase indicated that differences persisted among Prime Minister Rafiq al-Karami's rival Christian and Moslem ministers in the cabinet on how to deal with Lebanon's economic crisis.

Mr. Karami's 10-man cabinet held its first meeting in seven months on Thursday as a nationwide strike, called by the 250,000-strong General Confederation of Labor to protest soaring prices, paralyzed the country.

For the Record

Ministers of five of the six African nations known as the front-line states for their opposition to South Africa's apartheid policy have arrived in Moscow for a brief working visit, Tass said Wednesday. They are Angola, Mozambique, Tanzania, Zambia and Zimbabwe. Botswana was not represented.

Twenty-two people in Sierra Leone, including the dismissed former vice president, Francis Minah, have been charged in connection with last month's coup attempt, The National newspaper reported Wednesday in Freetown.

TRAVEL UPDATE

Airlines Asked to Inspect 900 Engines

WASHINGTON (AP) — The National Transportation Safety Board has urged airlines to inspect more than 900 Pratt & Whitney JT8D jet engines of the 200 series, following three incidents in which the engines malfunctioned in recent months.

In each case the planes, which are designed to operate with one of their two engines out, landed safely. The JT8D engine powers such popular aircraft as the Boeing 727, Boeing 737, DC-9 and McDonnell Douglas MD-82, a board spokesman said. The 200 series engine in question is used by about 300 McDonnell Douglas planes, he said.

The board asked the Federal Aviation Administration on Tuesday to "establish an appropriate inspection program" for the engine. The recommendation grew out of the board's investigation of an incident March 23 that involved an American Airlines MD-80 aircraft making an approach to Minneapolis. The board said a series of internal valves that direct air into the turbine blades in one of the engines stalled. The engine was shut down and the plane made a safe landing, the investigators said. Two similar problems were reported in December.

Greek coastal and inter-island ferry services were cancelled because of strong winds in the east and southern Aegean, the coast guard said. Weather forecasters said the bad weather was expected to continue Thursday. But the restriction on sailings from the port of Piraeus would be lifted if the weather improved Friday, the coast guard said.

TRADE:

Tough Measure

(Continued from Page 1)

United States' major trading partners, including Japan, West Germany, Italy, Taiwan, South Korea, Brazil and Chile, have widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax, such as when the president's special trade representative, Clayton K. Yeutter, left the reservation, as the White House puts it, in seeming to talk to the dollar down.

But lately some issues seem to have been slipping from Mr. Baker's control. He initially opposed the trade sanctions against Japan, but Mr. Yeutter and Commerce Secretary Malcolm Baldrige won the president's support. He lost another round with Mr. Baldrige when he induced a Japanese company, Fujitsu Ltd., to abandon its takeover of a French-owned American company, Fairchild Semiconductor Corp., even though the Treasury problems were left to bank-directed austerity programs.

Within the administration, Mr. Baker captured near absolute control of economic issues through the creation of the White House Economic Policy Council, and he has won widespread praise for the overhaul of the tax system that he engineered for Mr. Reagan last year.

Mr. Baker's place within the administration seems to remain pretty solid. Aides say his rapport with the president has never been easier, and it can only be helpful that a close associate when Mr. Baker was the president's chief of staff, Kenneth Duberstein, is now deputy chief of staff. Other top White House officials, including the chief

of staff, Howard H. Baker Jr., suit the Treasury secretary's pragmatic inclinations.

Further, the White House has been quick to defend Mr. Baker against some of the periodic assaults on his tax,

Reagan Adviser Is Rebuked for Criticizing Arms Strategy

By Steven V. Roberts
New York Times Service

WASHINGTON — The Reagan administration has rebuked Edward L. Rowny, one of its senior advisers, for criticizing the president's arms control strategy. It said Mr. Rowny's comments could complicate talks with the Soviet Union.

"It is somewhat difficult, and there's no sense denying that," Martin Fitzwater, President Ronald Reagan's spokesman, said Tuesday.

"I think it is fair to say that there are people who are somewhat upset about it and would rather he didn't make those comments, but I have not heard of any efforts to change his status as a negotiator."

In an interview Tuesday, Mr. Rowny was less critical of Mr. Reagan, saying, "I expect diverse opinions in the shop."

But he did take issue with Mr. Rowny's suggestion that the administration was not doing enough to reduce the Warsaw Pact's numerical superiority in conventional

forces while it was seeking reductions in medium- and short-range nuclear missiles in Europe.

Mr. Reagan insisted that this superiority "would have to be taken into account" in any agreement between Washington and Moscow on medium- and short-range missiles.

As Mr. Reagan spoke, the State Department rejected a Soviet demand that U.S. warheads for West German missiles be destroyed as part of a demand.

The Soviet demand was made in a formal statement Monday at the Geneva arms talks. The Kremlin also presented a draft treaty on medium-range arms at that time.

On Tuesday, Charles E. Redman, the State Department spokesman, criticized the demand.

"The Soviets had never previously raised the question," he said. "For them to raise this issue now suggests a lack of serious intent."

On Monday some officials said they had expected the issue to be raised and that the elimination of the warheads should be considered.

The United States has taken the

position that the nuclear weapons of its allies should not be covered by a Soviet-American treaty. But while the British and French have their own nuclear warheads, the warheads for the West German missiles are under U.S. control.

Mr. Rowny, a retired army lieutenant general who has spent 15 years in arms control work, prompted the debate Monday when he praised a commentary by former President Richard M. Nixon and Henry A. Kissinger, who was Mr. Nixon's chief foreign policy adviser, on the need to link a missile treaty with reductions in Soviet conventional forces. The article was published Sunday in the Los Angeles Times.

Mr. Rowny did not endorse their position, but he said the negotiations with Moscow should not be focused solely on the issue of medium- and short-range missiles and should also deal with such matters as conventional arms, regional conflicts and human rights.

He said the Soviet offer on medium- and short-range weapons was

a "pretty good deal." But he added: "That's the small picture. We have to look at the big picture."

"We don't have a consistent strategic policy," said Mr. Rowny, who said he was talking about policy recent administrations and not just that of Mr. Reagan.

Mr. Reagan did not state explicitly how the conventional weapons problems would be addressed. But White House officials have said the administration would probably try to attach an "understanding" to any arms pact, asserting that both sides would make a special effort to negotiate a reduction in conventional arms in separate talks.

Mr. Rowny has been one of many figures in recent days warning that the administration had not been sufficiently concerned about the Warsaw Pact's numerical advantage in conventional military forces. This advantage, the article said, would leave Western Europe vulnerable if nuclear missiles stationed there were removed.

The United States and the Soviet

Union have tentatively agreed to remove all medium-range missiles from Europe, with each side retaining 100 warheads outside Europe.

Earlier this month, Moscow also proposed removing from Europe all short-range weapons, those that can travel 300 to 600 miles (about 500 to 1,000 kilometers).

■ **Verification Issue**

Mr. Redman and other officials had a mixed reaction Tuesday to verification proposals in the Soviet treaty draft. The New York Times reported from Washington.

The Soviets have noted that they will be seeking a verification agreement in some of the basic areas which we require," Mr. Redman said. But he added that "the devil is in the details" and that an extended, technical discussion was still required.

For example, an American specialist said there were potential problems with the language in the Soviet draft saying that inspection sites could be used to produce or keep medium-range missiles. The Soviet draft contains no such provision.

New York's finest shopping is on Fifth Avenue. So is its finest hotel.



St. Regis Sheraton

The quality of its guests is the signature of a great hotel. Fifth Avenue & 55th Street, New York. The hospitality people of ITT. Toll-free in U.S. 800-355-3553, in W. Germany 010-3553. in N.Y. (212) 752-4500. Telex 149-365.

Falwell Steps Up Control Of Bakker's PTL Empire

By Art Harris
Washington Post Service

FORT MILL, South Carolina — By barring the Reverend Jim Bakker from retaking the pulpit of the Praise the Lord empire, or PTL, the Reverend Jerry Falwell has placed himself firmly in control.

Beneath crystal chandeliers in the ballroom of the grand hotel built by Jim and Tammy Bakker with money from their flock, Mr. Falwell announced Tuesday after a PTL board meeting that the board had cut all payments to the Bakkers, who he said had received \$4.8 million since January 1984 in salaries and bonuses.

As a team of outside accountants examined the books of the multi-million-dollar ministry, Mr. Falwell also announced that the Reverend Richard Dorch, Mr. Bakker's successor as PTL president, had stepped down and that another top Bakker aide, David Taggart, had been dismissed.

It was Mr. Dorch who negotiated a \$265,000 payment to Jessica Hahn, the church secretary with whom Mr. Bakker committed adultery in the 1980 incident that led to his resignation in March.

Mr. Falwell, who was asked by Mr. Bakker to take over PTL, said: "We intend to stay and will not step aside."

He said of Mr. Bakker: "His ministry here has ceased."

Mr. Falwell said that all bonuses to other PTL executives had been stopped as of Tuesday and that all compensation would be scrutinized.

Harry Hargrave, a Dallas businessman who took over as chief operating officer Tuesday, said five



Jessica Hahn speaking about her role in the Bakker case.

by PTL and has built \$60 million worth of projects at the PTL's Heritage Village USA in Fort Mill.

Mr. Grutman said he had recommended to the board that payments to Ms. Hahn stop. He said she might be asked to pay back what she had received.

Mr. Grutman said that, by talking to the press, Ms. Hahn had broken the agreement under which she was paid. But Ms. Hahn, 27, later said outside her home in West Babylon, New York: "I have done everything I've been asked to do. I've kept quiet."

The legislation could take the form of amendments to a bill au-

Soviet Embassy Plan Opposed in U.S.

By Neil A. Lewis
New York Times Service

WASHINGTON — Several members of Congress have moved to force the Reagan administration to scrap the agreement allowing the Soviet Union to build a new embassy on one of the highest hills in Washington, according to officials in the State Department and on Capitol Hill.

"We want them off that site."

Representative William S. Broomfield of Michigan, the ranking Republican member of the House Foreign Affairs Committee, said Tuesday.

Mr. Broomfield is working on one of several proposals making their way through the House of Representatives and the Senate to bar the Soviet diplomats from the site known as Mount Alto, in northwest Washington. Mr. Broomfield and others said in interviews that legislation to end Soviet use of the site was a certainty in the present atmosphere.

The legislation could take the form of amendments to a bill au-

thorizing State Department operations for the coming year. The bill is expected to be ready in two weeks.

Under an agreement signed in 1969, the Soviet Union and the United States provided each other with new embassy sites. The Soviet Union was given a high vantage point in Washington that some lawmakers say helps its electronic eavesdropping efforts.

At the same time, Congress has been investigating reported security breaches at the present U.S. Embassy in Moscow and assertions that the new embassy building under construction there is riddled with electronic listening devices.

The House Foreign Affairs subcommittee on operations voted Tuesday to subpoena State Department files after the chairman, Daniel A. Mica, Democrat of Florida, complained that information about security breaches in Moscow was being withheld from Congress.

The State Department spokesman, Charles E. Redman, said that some secret cables had been with-

held and that the State Department would "negotiate" their release to Congress.

In the Senate, Senator Bob Dole of Kansas, the Republican leader, has drafted a measure to force the Soviet Union to leave Mount Alto if the new U.S. Embassy in Moscow cannot be made secure by the end of the year.

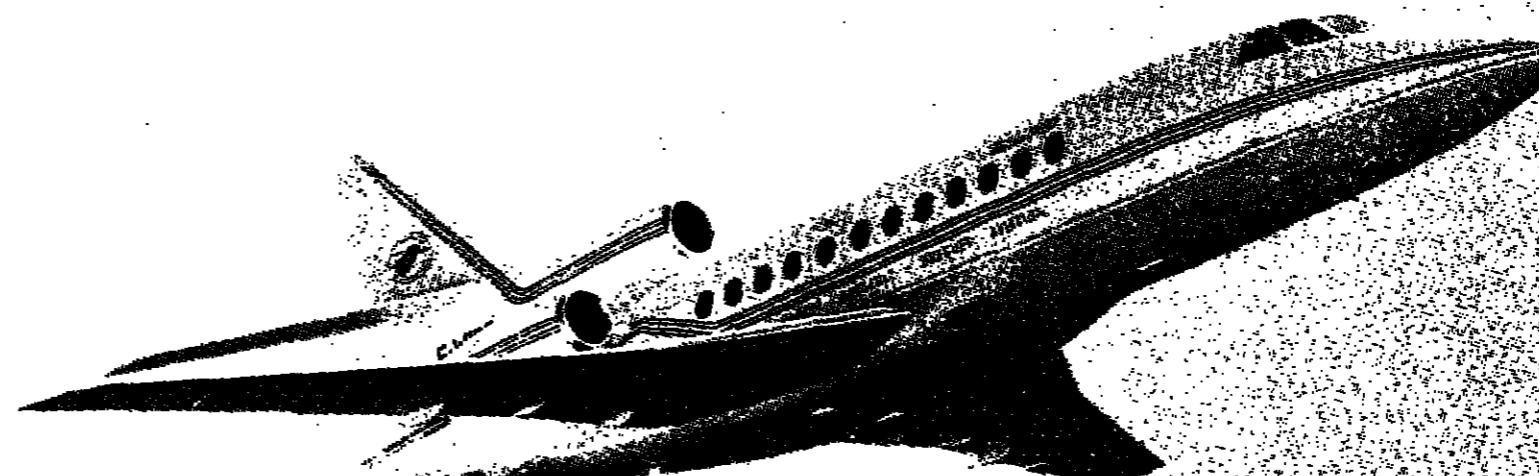
A State Department official said Tuesday that there would be no impediment in international law to scrapping the agreement as long as Moscow was given proper notice and was paid for any damages.

The official said the Soviet Union was believed to have spent \$60 million to \$70 million so far on the site. Some lawmakers say the Soviet Union should be asked to compensate the United States for the \$140 million spent so far on the new embassy in Moscow.

President Ronald Reagan has said that the Soviet Union will not be allowed to occupy all the buildings on Mount Alto until the United States is satisfied that it has a

secure new embassy.

When it comes to private jets, one show sets the standard.



And one plane meets it.

See the Falcons at the Paris Air Show. June 11th/21st 1987.

The Paris Air Show? It's where the elite decision makers in the aircraft field gather to face the manufacturers, highlight the winners, and set the trends. Where creators plan the aircraft of tomorrow. And buyers make it what it's today. If you believe that a plane has to be one of the most outstanding achievements of our time; a balance of technology, science and beauty, a harmony between high performance and extreme safety, you will be at the FALCON Display.

The widebody FALCON 900 is the most accomplished of large business jets: the only one built with the computer technology used for Mach 2+ fighter jets; the only one to do without stick pushers, stick pullers, stick shakers etc...

If you belong to this uncompromising elite, no doubt we shall have the privilege of your visit next June, at the FALCON Display.

Paris Air Show

Name/Titl	Function
Company	Address
Phone	
Now flying a	
Please let us know when you plan to come by sending your business card to Paul DELORME - Dassault International - B.P. 32 - 92420 Vauresson - France	
Tel.: (33.1) 47.41.79.21 - Telex: 203944 F. 30-4-87	

Dassault International

Business takes off with Falcon

Messages Indicate Waite Is Alive, Well

New York Times Service

LONDON — Unofficial, unconfirmed messages from Lebanon continue to report that Terry Waite, the kidnapped envoy of the archbishop of Canterbury, is alive and well, the archbishop's office said Tuesday.

Mr. Waite disappeared in Beirut on Jan. 11 while trying to negotiate the freedom of foreign hostages seized by Lebanese guerrilla factions. There has been no firm word on his whereabouts or health since then, and no formal demands for ransom have been reported.

"That's part of the frustration," said Chris Osborne, a spokesman

for the British Foreign Office. "There has never been a formal claim or demand and we are left with a bag of theories."

The archbishop, the Most Reverend Robert Runcie, has sought the aid of the Iranian government, which is thought to have considerable influence with the Hezbollah, or Party of God, faction that is suspected of holding Mr. Waite.

In particular, Archbishop Runcie appealed to the speaker of the Iranian parliament, Hashemi Rafsanjani, who in turn suggested the archbishop help trace hostages kidnapped by Christian Lebanese guerrillas.

"That's part of the frustration," said Chris Osborne, a spokesman

A Tale of Two Budgets

Even the ebullient Yasuhiro Nakasone may be crestfallen this week as he discusses disputes between Japan and the rest of the world with American leaders. Quite unusually, a prime minister has had to withdraw a tax proposal from a hostile Diet. Mr. Nakasone's Washington visit may be one of his last free trips, because his party is a hard taskmaster and will not forget defeat easily. So is this a sterile conference between lame ducks?

It does not have to be. The Reagan presidency still has a year and a half in which to introduce common sense into economic policy. The Liberal Democrats, with or without Mr. Nakasone, will still dominate Japanese politics. The possibility of progress on the economic front between now and the Venice summit meeting in June should not be sold short.

Mr. Nakasone was defeated on a good proposal that came at a bad time. Fiscal reform that shifts part of the tax burden from direct to indirect taxes is sensible in most countries. It can raise incentives to work and to save. Japan, where "sales tax" is a dirty phrase, is eventually going to need more taxes to finance the implications of an aging population. But the last thing it needs in the immediate future is either more taxation or more savings.

The yen is so strong, and threats of discrimination against Japanese goods are so widespread, because Japan is running a huge trade surplus — because it is saving too much. It is unlikely that the vast personal savings can be reduced fast. So Tokyo has to act on the side of govern-

ment saving, pushing the budget deficit up for a time. This takes a combination of higher public spending — on things Japan seriously needs — and tax cuts, and that is what the governing party seems to have promised for the next few months.

The 1987-88 budget was devoid of any such boost. But at least it has now been adopted, thanks to the decision to shelve the sales tax, and so the way is clear for a meaningful supplementary budget. Tokyo talks of a boost of about 1.5 percent of GNP, a significant sum. It also talks of plowing an extra \$30 billion of loans into Latin America during three years, which would help the debtors. But the world, naturally, looks on these promises with caution. Expansionary budgets have been promised before but have proved an illusion — creative accountancy that changes little. More foreign lending could mainly serve to increase Japan's exports further, perpetuating the vast surplus.

But this is a much better path to tread than the present and impending sanctions on trade with Japan, which can only slow down the drive toward better U.S. competitiveness that President Reagan advocates, and force other countries — notably in Europe — into new protectionism.

It is a tale of two budgets. If Japan can deliver on its present vague promises of an expansionary budget, and the Reagan team can show more political flexibility toward a more restrictive one — with modest tax increases — world economic prospects could change rapidly for the better. INTERNATIONAL HERALD TRIBUNE

Meese's Brave Stance

Nazism embodied one of history's great evils; to resist it now, 42 years after World War II, sounds like routine virtue. But it can require strength, even courage. Twice now in a week, the U.S. attorney general, Edwin Meese, has shown it.

First, Mr. Meese overrode strong rightist sentiment in the case of Karl Linnas, deporting the former concentration camp commander to the Soviet Union, where he is under a death sentence for killing innocent Jews. Then, with the support of Secretary of State George Shultz, the attorney general declared Kurt Waldheim, the president of Austria, to be a suspected wartime persecutor of Jews who should be stopped at the border should he ever return to the United States as a visitor.

Strictly speaking, Mr. Meese was only following the law, yet each act was courageous. Each was supported by impressive evidence gathered by the Justice Department's Office of Special Investigations, yet the attorney general had to resist a tide of ideology and misinformation.

To America's chagrin, the policy of denying haven to Nazis is quite recent. The nation that saved the world from fascist tyranny long served as a refuge for thousands of Hitler's henchmen, many of them welcomed as fugitives from communism.

Then in 1979, Representative Elizabeth Holtzman of New York pressed for a new policy and for the resources to enforce it.

— THE NEW YORK TIMES.

Trash Without a Country

One day last month a sturdy barge pulled by a tugboat set out from Long Island, New York, for southern shores. It carried a cargo weighing 3,100 tons and consisting of a principal product of the northeastern United States, a product that some call the inevitable and irreducible detritus of the workings of an advanced civilization and that others call simply garbage.

Meanwhile in Washington, the staff of Senator Alfonse D'Amato, a Republican of New York, was working feverishly to find a port — any port — that would accept the barge. We fear, however, that things have reached the point where there is nothing left to be done but for Islip to declare victory and call its garbage home.

To the sound of high school bands, fire horns a specially composed poem and the oratory of Senator D'Amato, Islip should welcome back the ship that challenged the might of North Carolina, Mexico and Governor Edwards, and pin medals on the four-man crew of the tugboat. There may still be a problem as to what to do with the garbage, but with any luck even that will be taken care of. By the time V-G Day is celebrated, Senator D'Amato, given his resourcefulness in such matters, may well have gotten the barge commissioned as the first nuclear submarine with flies.

— THE WASHINGTON POST.

Other Comment

The Cost of PLO Unity

The long-fighting factions of the Palestine Liberation Organization have concluded their efforts at reconciliation in Algiers, proclaiming that unity has been restored after four years of bitter polemics and sometimes bloody hostility. Now the PLO must contend with the cost of this tedious achievement.

Within hours of the conference, Egypt shut down PLO offices in Cairo in angry response to the nasty things said about it by PLO radicals. Jordan had earlier done the same. Syria can be counted on to continue

exploiting divisions within the PLO. In Lebanon, local forces remain determined to stop the PLO from re-establishing its armed autonomy. There are those in the Arab world who welcome the appearance of PLO unity. But in the Arab states that matter most, the PLO's isolation has only deepened.

Israeli hard-liners can take comfort from the Algiers meeting. Prime Minister Yitzhak Shamir has dismissed the idea of an international conference as "insane." In the post-Algiers political climate the prospect of such a conference seems more distant than ever.

— The Los Angeles Times.

INTERNATIONAL HERALD TRIBUNE

JOHN HAY WHITNEY, Chairman 1958-1982

KATHARINE GRAHAM, WILLIAM S. PALEY, ARTHUR OCHS SULZBERGER Co-Chairmen

LEE W. HUEBNER, Publisher

JOHN VINOCUR, Executive Editor • WALTER WELLS, Editor • SAMUEL ABT, KATHERINE KNORR and CHARLES MITCHELLORE, Deputy Editors • CARL GEWIRTZ, Associate Editor • ROBERT DONAHUE, Editor of the Editorial Pages

RENÉ BONDY, Deputy Publisher • ALAIN LECOUR and RICHARD H. MORGAN, Associate Publishers • FRANÇOIS DESMAISONS, Circulation Director • ROLF D. KRANEPUHL, Advertising Sales Director

International Herald Tribune, 181 Avenue Charles-de-Gaulle, 92200 Neuilly-sur-Seine, France. Tel.: (1) 46.37.93.00. Telex: 61359; Circulation: 61232; Editorial, 61218; Production, 63069.

Editor de la publication: Walter N. Thayer.

Editor of Asia: Michael Richardson, 5 Cemetery Rd, Singapore 0311. Tel: 472-7768. Telex: RS5628

Managing Dir. Asia: Malcolm Ginn, 50 Gloucester Road, Hong Kong. Tel: 5-861056. Telex: 61170

Managing Dir. U.K.: Robin MacKinnon, 45 Long Acre, London WC2. Tel: 836-4902. Telex: 252009

Gen. Mr. W. Germany: W. Lauebach, Friedrichstr. 15, 6000 Frankfurt/M. Tel: (069) 267555. Telex: 47173

S.A.: Michael Clegg, 850 Third Ave., New York, N.Y. 10022. Tel: (212) 751-3890. Telex: 47173

© 1987, International Herald Tribune. All rights reserved. ISSN: 0294-8032

The Zero Option Wouldn't Leave the West Uncovered

By Helmut Schmidt

The writer, publisher of *Die Zeit*, was West German chancellor from 1974 to 1982.

HAMBURG — The rapid movement toward an arrangement that would remove Soviet and Western intermediate-range missiles from the European theater has caused great concern, even among longtime advocates of arms control. As one who originally encouraged the "zero-zero option," and was forced from office partly for advocating the idea, I urge my nervous friends in Europe, and America to embrace it. Their fears that the removal of these weapons will leave Europe vulnerable to Soviet attack are misplaced.

It is first necessary to understand some recent history. The problem was created by Moscow's decision to deploy newly developed SS-20 rockets in the mid-1970s, which created a disparity of power in Europe. This fact was noted by President Gerald Ford and his secretary of state, Henry Kissinger, during the summit meeting at Vladivostok in 1974.

Mr. Ford, however, decided to solve the problem after his expected re-election in 1976 within the framework of the SALT-2 agreements, a course that I, as West German chancellor, accepted. But Jimmy Carter, who became president, did not accept my opinion that the SS-20s posed a growing political and military threat to West Germany, and he decided not to tackle this problem within the framework of SALT-2.

During the 1980s, I repeatedly pointed to a zero-zero solution, under which both sides would eliminate all intermediate-range missiles, as being the optimal outcome of the negotiations. Leonid Brezhnev, the Soviet leader, rejected this formula but agreed to negotiations, which began in the fall of 1981. In the meantime, President Reagan, at my suggestion, had publicly endorsed the zero-zero formula. In spite of great effort and skill applied by the American negotiator Paul Nitze, the negotiations failed and the deployment of Pershing-2s and ground-launched cruise missiles started at the end of 1983.

It is ridiculous to claim that the zero-zero solution is a "communist proposal," as some American public figures are quoted as having said. It has been a Western proposal from the beginning. If in 1987, as I sincerely hope, the zero-zero formula is going to be agreed upon between East and West, it will be a concession by the East and not by the West.

Why does Mikhail Gorbachev

make that concession? The Kremlin has two main reasons:

First, it had hoped, with the help of

the peace movements in the West, to prevent the deployment of Western intermediate-range missiles. These

missiles were deployed and Soviet leaders now realize that the Pershing-

2s and ground-launched cruise missiles constitute a serious threat.

Second, Mr. Gorbachev must open a gateway toward further mutual arms reductions because the urgently needed, for economic reasons, to scale down his military expenditures, which amount to 12 to 14 percent of the Soviet gross national product. He cannot otherwise hope tangibly to improve the Soviet standard of living. An improvement he dearly desires.

missiles, and Mr. Gorbachev has indicated his willingness to do so.

2. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

3. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

4. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

5. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

6. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

7. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

8. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

9. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

10. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

11. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

12. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

13. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

14. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

15. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

16. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

17. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

18. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

19. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

20. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

21. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

22. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

23. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

24. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

25. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

26. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible deterrence.

27. Some military thinkers in the West, including the supreme allied commander in Europe, General Bernard Rogers, have stressed the belief that abandoning short-range missiles would deprive the West of the capacity to use nuclear weapons first in response to a Soviet conventional attack. Pointing to the Soviet Union's numerical superiority in conventional weapons in Europe, General Rogers argues that the option to use short-range nuclear weapons first is vital to credible

SCIENCE

Enlightening Physics Failure

By Malcolm W. Browne
New York Times Service

ONE hundred years ago this month, two experimenters in an Ohio basement gently rotated a carousal of mirrors floating in a tub of mercury and inadvertently smashed the reassuring vision of a clockwork cosmos that had prevailed since the time of Sir Isaac Newton.

Physicists and philosophers have anguished over the experiment ever since, but one by one, nearly all have been compelled to abandon cherished theory in the face of its evidence.

The experimenters, Albert Abraham Michelson and Edward William Morley, set out to prove the existence of "ether" — an intangible and invisible fluid thought by most 19th-century scientists to permeate the entire universe. Michelson and Morley expected to demonstrate that ether speeded or slowed light waves; if these were the case, the ether would represent a universal standard against which the positions and motions of everything in the universe could be measured.

Much to their consternation, they failed. But their failure was pivotal. A new generation of scientists, struggling to explain the shocking experiment, eventually demonstrated that nothing in the universe has absolute reality, and that causality itself ceases to operate at the microscopic level of existence.

The experiment was critical to Einstein's revolutionary contention that there is no such thing as a universal yardstick for space and time. So last week, scientists, educators and artists gathered in Cleveland to begin a six-month observance of what many scientists regard as science's most crucial failure.

Many experimenters before Michelson and Morley had demonstrated that light behaves in some

ways like the waves that traverse bodies of water or the sound waves that travel through air. Reasoning by analogy, most of the world's leading scientists had therefore concluded that some kind of invisible medium analogous to air or water — the ether — must provide a medium for waves of light to propagate through space.

The relative movement of the ether ought to have an effect on the speed of light passing through it, the theory went.

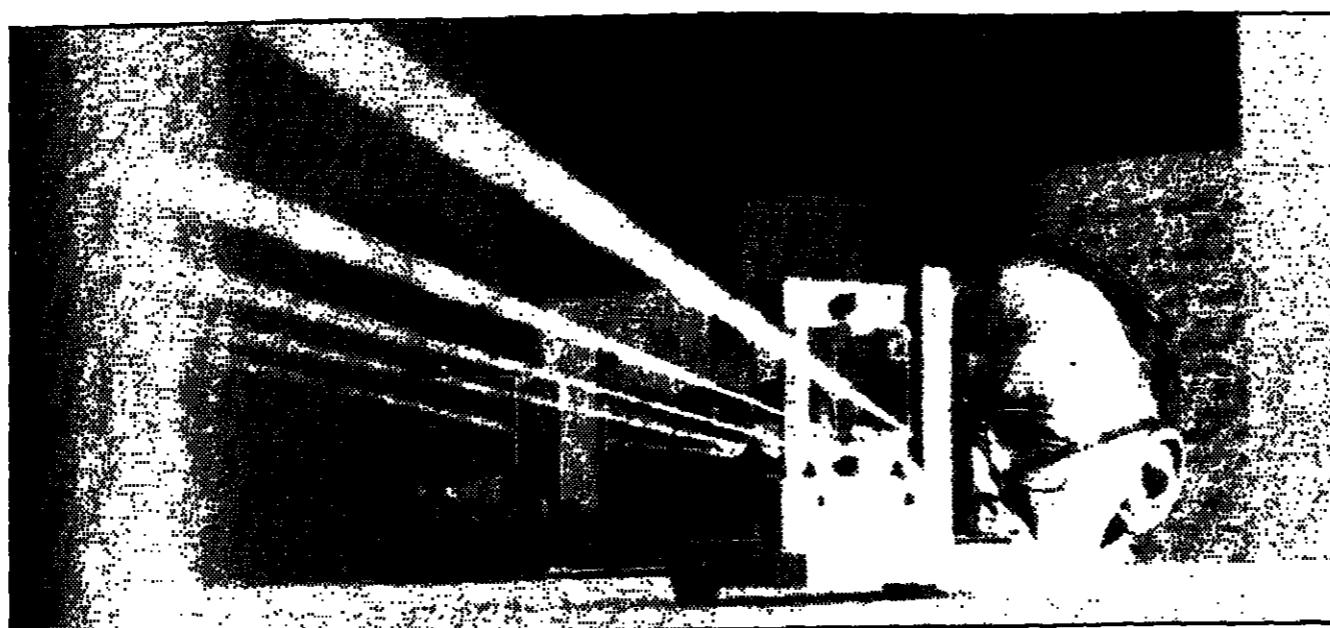
To test this idea, Michelson and Morley built a superbly tuned instrument designed to compare the speed of light moving in the same direction as the Earth with the speed of light moving in a perpendicular direction. If the ether were to affect the speed of light waves, a slight but detectable difference should be evident in the speed of light moving along perpendicular paths.

Michelson later explained the experiment to his daughter Dorothy while she was a child, and she recounted his explanation in "The Master of Light," her 1973 biography of her father. Michelson compared the perpendicular light beams in his experiment to swimmers racing on a river.

"Two beams of light race against each other," he told his daughter, "one struggling upstream and back, while the other, covering the same distance, just crosses and returns. The second swimmer will always win, if there is any current in the water."

Michelson had begun work on the problem years earlier after an adventurous childhood. He had been born in Prussian-occupied Poland in 1852, the son of a young merchant who was subjected to the anti-Semitic persecution of the period. At the age of three he emigrated with his family to the United States, where the Michelsons first settled in a gold-rush town in Nevada and then in San Francisco.

When two beams of light from the same source are made to travel separate paths of virtually identical



Prof. Donald E. Schaele with a replica of the 1887 interferometer.

Michelson began his study of physics at the Naval Academy at Annapolis, where he earned a degree and a commission.

In 1880 he obtained leave from the U.S. Navy to pursue physics research in Germany, and in 1881 at Potsdam, Michelson conducted his first attempt to measure the speed of light.

He used a mirror array to



Albert A. Michelson.



Edward W. Morley.

length of their recombination results in a pattern visible through a telescope of vertical bright and dark stripes called "fringes." The slight alteration in the distance of either light path or of the speed of one of the light beams throws the light waves out of phase, changing the pattern. Michelson lined up his apparatus so that one light beam would travel in the same direction as that of the Earth, while the other light beam would travel perpendicular to it. By turning the apparatus 90 degrees, he could observe the effect of the ether.

The technique, which Michelson refined in the 1920s to make the first measurement of the diameter of a distant star, is now used routinely by astronomers.

Since light travels in waves, the combination of two or more beams of light waves results in interference; when the crests of two waves coincide, the result is a new crest representing the sum of the smaller crests. Two troughs produce one doubly deep trough, while a crest superimposed on a trough results in a null point, in which the wave is flat.

When two beams of light from the same source are made to travel separate paths of virtually identical

length, their recombination results in a pattern visible through a telescope of vertical bright and dark stripes called "fringes." The slight alteration in the distance of either light path or of the speed of one of the light beams throws the light waves out of phase, changing the pattern. Michelson lined up his apparatus so that one light beam would travel in the same direction as that of the Earth, while the other light beam would travel perpendicular to it. By turning the apparatus 90 degrees, he could observe the effect of the ether.

The technique, which Michelson refined in the 1920s to make the first measurement of the diameter of a distant star, is now used routinely by astronomers.

Since light travels in waves, the combination of two or more beams of light waves results in interference; when the crests of two waves coincide, the result is a new crest representing the sum of the smaller crests. Two troughs produce one doubly deep trough, while a crest superimposed on a trough results in a null point, in which the wave is flat.

When two beams of light from the same source are made to travel separate paths of virtually identical

length, their recombination results in a pattern visible through a telescope of vertical bright and dark stripes called "fringes." The slight alteration in the distance of either light path or of the speed of one of the light beams throws the light waves out of phase, changing the pattern. Michelson lined up his apparatus so that one light beam would travel in the same direction as that of the Earth, while the other light beam would travel perpendicular to it. By turning the apparatus 90 degrees, he could observe the effect of the ether.

The technique, which Michelson refined in the 1920s to make the first measurement of the diameter of a distant star, is now used routinely by astronomers.

Since light travels in waves, the combination of two or more beams of light waves results in interference; when the crests of two waves coincide, the result is a new crest representing the sum of the smaller crests. Two troughs produce one doubly deep trough, while a crest superimposed on a trough results in a null point, in which the wave is flat.

When two beams of light from the same source are made to travel separate paths of virtually identical

IN BRIEF

Pluto: Is It a Planet or an Asteroid?

WASHINGTON (NYT) — Pluto is the smallest planet in the solar system, a carefree wanderer that is usually the farthest planet from the Sun, a heavenly body that many people think was named after a Walt Disney character. Now Pluto is facing an identity crisis, with some astronomers suggesting it is not a planet at all.

Among the proponents of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even smaller than earlier thought, perhaps 1,600 miles in diameter rather than 2,500, and that it was a lot less dense than had been calculated.

Standard practice is to remove the name of a move to lower Pluto's designation from planet to large asteroid are Brian Marsden, director of the Smithsonian Institution's Astrophysical Observatory in Cambridge, Massachusetts, and Frank Cooper, director of the Burke Baker Planetarium in Houston. Opposing the change are astronomers at the United States Naval Observatory in Washington and, not unexpectedly, Clyde W. Tombaugh, who discovered Pluto in 1930. Mr. Tombaugh, emeritus professor of astronomy at New Mexico State University, said Pluto was much larger than the largest asteroid and also had its own satellite, like the Earth's Moon. "Asteroids don't have satellites," he said. Mr. Cooper said recent discoveries had shown that Pluto was even

TURKEY

INDUSTRY, FINANCE AND TOURISM

Under the premiership of Mr. Turgut Özal, Turkey has gone through four years of major economic reconstruction. Standing at the gates of Europe, and with one of the highest growth rates in the industrialized world, it has recently applied for full EEC membership.

NOW that it has applied for full EEC membership, Turkey, which stands astride Europe and Asia, is a potential industrial and agricultural force that has to be considered by its future partners. It is about to become the economic powerhouse of the southeast Mediterranean and is already the military guardian of NATO's regional flank.

Many Turkish businessmen say their country will make a positive contribution to the EEC, even in the agricultural sector, and not simply take subsidies and handouts. "This is really a rich country and we have plenty to offer. We are not like some of the poorer Mediterranean regions," said one industrialist.

As the Turkish Premier, Mr. Turgut Özal, a proponent of free trade, says: "We don't want more aid, but we do want more trade."

Since Mr. Özal began a great liberalization policy and started to turn the hidebound state industrial sector upside down four years ago, Turkey has taken on a new, almost unrecognizable aspect, confounding many outside the country.

Turkey is now on a growth cycle in virtually all sectors of manufacturing and industry. When major irrigation schemes in the southeast of the country are completed, agricultural production is expected to triple.

Last year, it had one of the highest growth rates in the world — 9.2 percent, compared to 6.3 percent in 1985. It was the highest in any OECD country. This year the target is just over 6 percent, and there is every hope this will be achieved. Inflation has been slashed from 100 percent in 1980 to a little over 30 percent last year. By the end of 1987, it is hoped that the rate will be further lowered.

Turkey's per capita income of \$1,000 means that few Turks are well off as individuals; and unemployment is high — more than 2.5 million.

The emphasis today is very much on exports — from textiles to glass to machinery and agricultural products. Last year, exports were worth more than \$8 billion, with manufactured goods making up 75 percent of the value. During the first ten months of last year, imports totaled just over \$9 billion, less than one percent more than the corresponding

period in 1985. Exports for the same period were \$5.9 billion. Workers' remittances have been steadily falling, and were \$1.2 billion during the first nine months of 1986.

The financial sector, with more than 50 banks, has been going through a period of restructuring and consolidation due to the culmination of non-performing loans — many to the state industrial sector — during the early and mid-1980s. Now being weaned into profitability, the banks are becoming better managed and more internationalized. In order to boost the export trade, a strong emphasis is being put on trade finance.

Turkey is forging ahead as an industrial nation, and actively developing its tourist industry, which is now the least developed in the Mediterranean (2 million visitors last year). The government recently embarked on a major program to build and improve resort facilities, especially on the Aegean and Mediterranean coastlines.

Mr. Özal's free market policies have had a rapid and profound effect on restructuring the country. Since his election in 1983, he has introduced free zones, put state corporations under the microscope, ordered major investments in communications and transportation infrastructure, put the squeeze on poorly run banks and, most important, tried to get a clean bill of health from the International Monetary Fund and the World Bank as he pushes growth rates up and inflation down.

In order to attract more foreign investment, vital in order to modernize the industrial sector, much of which still lingers along on outdated technology, he has introduced BOT — build-operate-transfer — for big infrastructure projects. BOT schemes include the second Bosphorus Bridge, now nearing completion (a third bridge is to go ahead as well), some thermal power stations and a big tourist development project.

Under the BOT scheme, a bidder for a contract also raises the financing, operates the project and after a period of usually 15 years, can sell off its share in the joint venture, probably to the local partner.

One of the biggest boosts to manufacturing and the economy is the 25-year bilateral trade agreement signed with the Soviet Union in 1984. Under the deal, the Soviet Union



The Bosphorus bridge linking East and West.

will deliver 750 million cubic meters of gas beginning later this year, providing Turkey with a massive injection of cheap energy. This amount will rise to 6 billion cubic meters by 1993 and will be paid by offset trade — either services, such as construction, or manufactured or agricultural exports.

Turkey has limited natural oil resources, hence the recent confrontation with its Greek neighbor in the Aegean. Greece has eyed Turkey's application to join the EEC coolly, as the Turkish economic machine gears up and politicians and businessmen in Ankara and Istanbul try to reach a mutual understanding about what is best for the country.

Mr. Nuh Kuscu, chairman of the influential Istanbul Chamber of Commerce, commenting on the change in Turkish attitudes toward the EEC, says the spirit of the original EEC agreement that gave Turkey associated membership was not really understood. "Now, since we did proper studies after 1979, we understand the crucial necessity of belonging to the EEC," he says.

A more outspoken view comes from the KOC industrial empire where vice president Mr. Tugrul Kudargobil abruptly dismisses ill-informed foreign comment that Turks are Arabs, saying: "We have been living for the past four centuries in Europe, our mentality is European. It is not only the Treaty of Rome that gives us the right to belong to the

Mr. Turgut Özal, the Turkish Premier, a proponent of free trade.



ECC, but history itself also gives us the right. Our trade and investment link depend on Europe, 55 percent of our raw materials and imports come from Europe and we want to continue this way."

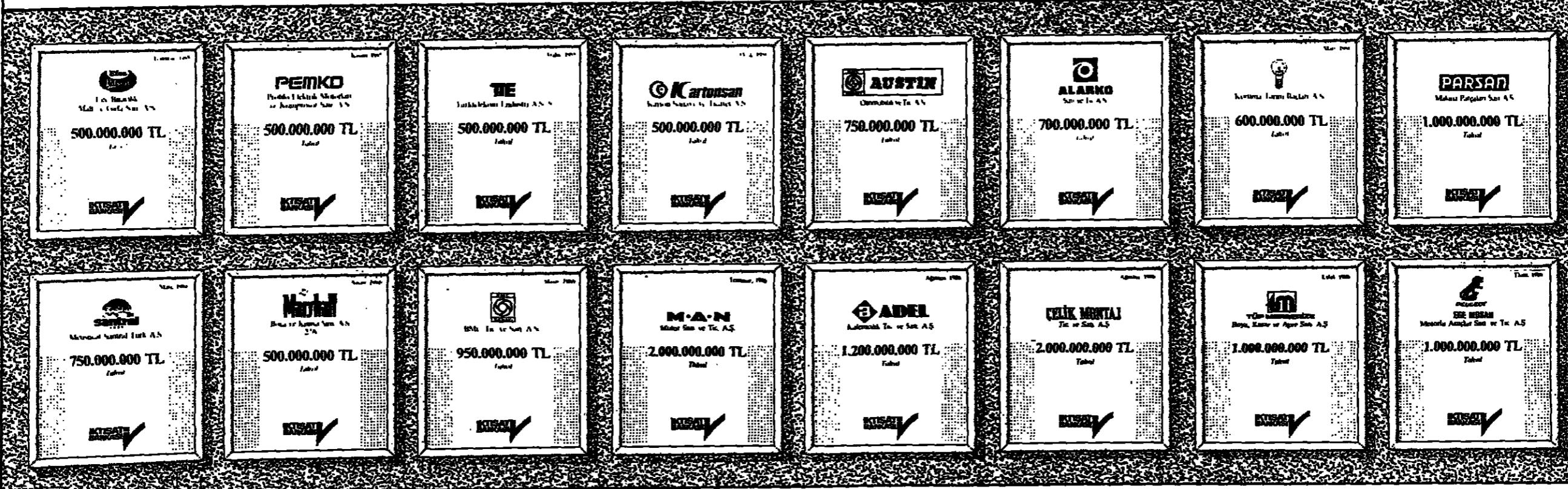
Many Turkish businessmen are dismayed at the somewhat medieval image that some Europeans have of Turkey. "We are certainly not just ignorant peasants," says one businessman.

Mr. Sarik Tarz, chairman of Enka Holding Investments, a major construction group, says: "Turkey's greatest mistake is allowing Europe not to know us and not to realize our potential. Europe can serve us in many ways and we can

(Continued on page 8)

CORPORATE BONDS

Which bank has underwritten 40% of bond issues in Turkey?



Turkey's capital market is growing fast. And as you can see, İktisat Bankası has been at the forefront of its development.

We are the only merchant bank to be included by the Government in the syndicate of banks for the distribution of Bosphorus Bridge Revenue Sharing Certificates.

Not surprisingly, we are also the leading bank in domestic bond issues.

We can provide almost every merchant

banking service you want in Turkey, from a complete package for project finance to international trade finance, where we have a 10% market share.

Our branch network and our foreign exchange department have on-line real-time automation, so we are always able to act quickly and efficiently.

Whenever time is money, you'll find İktisat can put you ahead of the competition.

İKTİSAT BANKASI

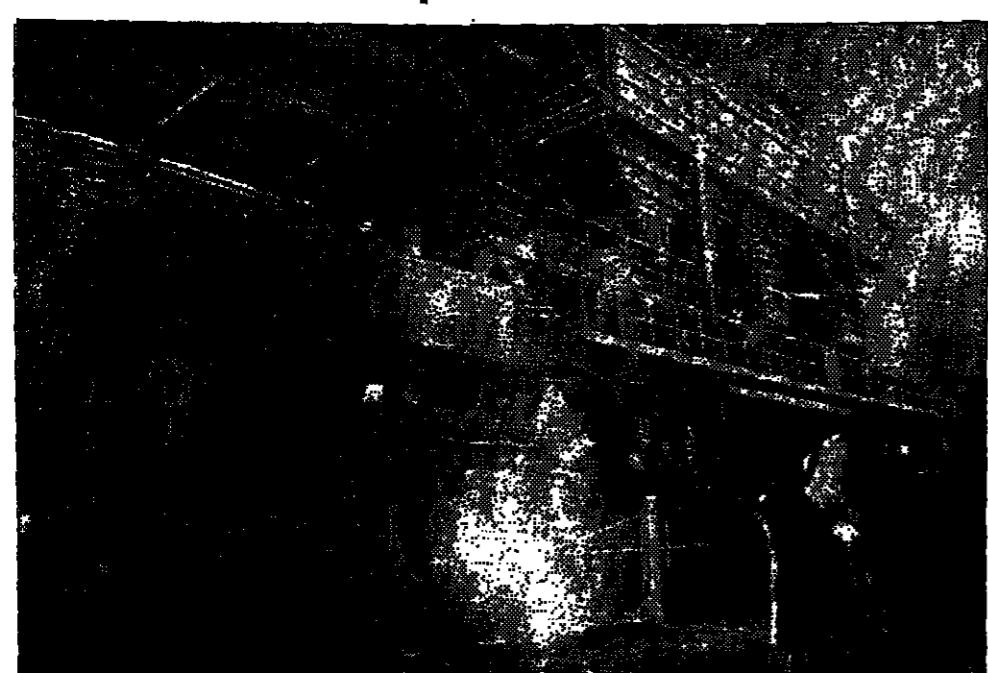
Turkey's Merchant Bank

For further details please contact Arthur Wilkinson, Assistant General Manager, İktisat Bankası, Buyukdere Cad. 165, Esentepe, İstanbul, Turkey. Telephone: 172 7000. Telex: 27685. Fax: 172 5071.

Branches at İstanbul (8 branches), Ankara, İzmir, Bursa, Adana, Mersin, Gaziantep, Denizli, İskenderun, Samsun, Ordu

ADVERTISING SECTION

Industrial Expansion Fastest in OECD



The steel industry plays a major part in meeting Turkey's manufacturing requirements.

ANYONE who thinks of Turkey as a land of farmers where things have changed little since time immemorial, is badly out of date. The country has the fastest-growing manufacturing sector in the Organization for Economic Cooperation and Development (OECD) and is regarded as having an industrialized economy even though its per capita GNP is not much higher than \$1,000.

First-time visitors to Istanbul and Ankara are usually surprised by the bustling industrial world they find with its growing private sector. Turkish industry consistently grows at annual rates of more than 5 percent. It grew by an estimated 9.2 percent in 1986, and by 6.3 percent in 1985. The 1987 target is 6.4 percent.

A glance at the structure of Turkish industry reveals a paradox. About 60 percent of all manufacturing industries are still owned by the state (despite plans for some privatization) and more than half of fixed capital investment comes from the public sector. But Turkey's growth and its new-found success at

exporting come from the private sector. Most private sector corporations are basically family groups, with the giants nearly all based in Istanbul. Though there are about 15 major groups, the KOC and Sabanci industrial empires dwarf almost everyone else on the market.

Turkish industrial products are now remarkably diversified. The switch away from local market orientation to the export market in 1980 came at an opportune moment. Turkish producers sell more than 2,000 industrial goods ranging from motor vehicles to machinery, ceramics, glass, cement and processed foods.

Turkey's geographical position and its relatively low labor costs give its industries a competitive edge in Middle Eastern and some Eastern European markets.

The lead sector remains textiles. Again, the outside world still has not realized how strong the Turkish textile industry is. In 1985, Turkey earned \$2.2 billion from textile exports, and has established itself as the main supplier for the European Community, a relationship

which may one day be the main prop for closer political ties. Turkey is the only textile supplier for which the EEC has recognized annual growth quotas of around 6 percent on average.

The biggest textile producer is the Sumerbank, now being reorganized by its general manager, Mr. Erkan Tarhan. Other leading firms are Altinayildiz, Sokras and Mensur Sanat.

Like Sabanci and KOC, the other major groups — Anadolu Endustri Holding, the Cukurova Group, Yashar Holding, to name a few of the largest — tend to have a finger in every sector from the automobile industry to food and drink and to tourism. All except AEEH own at least one bank. Cukurova owns three.

None of these is as large as Tupras (the state-owned petroleum marketing company) or TEK (the electricity authority). But as suppliers who have done business with both the private and public sectors in Turkey will confirm, there is a world of difference between the two.

Turkish industry has been undergoing major and often

difficult changes since around 1980, receiving only limited assistance from the state. Demand has been cut in the domestic market. Interest rates have risen from 30 to 50 percent above inflation — no one quite knows what banks charge for their borrowing — but it seems clear that until very recently, funds were only available at 70-80 percent, even if costs are now finally falling.

Export markets have had to be conquered with little expertise (though it seems to have been quickly acquired) and with no export insurance facilities. The major assistance has been tax rebates on export earnings, something GATT is pressuring Turkey to phase out, and a rule that the equivalent of up to 20 percent of export earnings in a firm's profit is exempt of corporation tax.

In addition, many Turkish private sector corporations complain about unfair competition from the state sector and capricious price increases for raw materials without regard to market conditions. Hikes of 66 percent with no warning are not uncommon. And state sector raw materials may be of doubtful quality or delivered late.

"I don't think Western businessmen appreciate the handicaps we have to work under every day," says the president of one large Istanbul corporation. "If they had sudden power cuts, bureaucratic interference, impossibly high interest charges and a virtual absence of skilled labor, they would feel that a 15 percent export tax rebate didn't go very far to offset the disadvantages they faced."

But in spite of these difficulties, Turkish private sector industries have mostly managed to live with the turnaround of the 1980s. There have been a few bank-



(Continued from page 7)

serve Europe in return. It is essential that we join the EEC." Mr. Nejat Eczacibas, head of one of Turkey's largest pharmaceutical groups and a perceptive internationally-minded businessman, firmly believes in joint ventures and the transfer of technology in order to keep abreast of developments.

"Just now Turkey is ready to take on board more technology, although it is not always a question of 'know-how' but sometimes know-who," he says. He too is a keen supporter of the EEC. "We are absolutely ready to join. We have no alternative. We cannot look to the East, and integration with the European markets is our only way ahead," he adds. He does not foresee any real difficulties over agriculture. "We have vast natural resources in agriculture, and what the rest of Europe doesn't have, we have, and vice versa," says Mr. Eczacibas. He believes that Turkey could readily absorb many of the EEC's surplus agricultural products such as from the dairy sector.

Turkey is one of the world's largest wheat producers; it also grows tobacco, tea and many kinds of nuts not produced in any large quantity by EEC countries. Some economists argue that Turkish agricultural exports on a swap basis might help smooth out the farm produce anomalies that are the despair of the EEC commission in Brussels.

More European than Asian, more Asian than European; a bridge between Asia and Europe, or a bridge between Europe and Asia; the crossroads between East and West — such descriptions of Turkey abound. But the feeling today is very definitely biased towards Europe, especially in Istanbul, the commercial heart of the country. — Lee Voysey



One of the gateways of the Dolmabahce Palace overlooking the Bosphorus.

trupies — some of which have helped pull down banks with them — but not as many as seemed likely five years ago.

"Don't underestimate the difficulties the corporations

face," warns an Istanbul industrialist. "Many of them are very short of working funds and things are still difficult in a few cases. If

you want to see who is healthy, take a look at the

export performance of (where Turkey still lags far behind its competitors).

The market leaders are now concentrating on areas where grumblings are numerous and criticism of Mr. Özal is not uncommon, his medicine is clearly working. — Thomas Faulkner

The distinctive line of Akbank

"Most profitable private sector company in Turkey"

ASSETS	Balance sheet as at 31.12.1986
Cash and due from banks	879,953,698
Reserve requirements	275,599,947
Treasury Bonds	217,905,808
Loans	910,247,387
Participations	89,744,675
Premises and equipment	66,873,925
Other assets	303,079,772
Total assets	2,743,405,212
LIABILITIES	
Deposits	2,142,329,673
Central Bank	9,831,988
Other liabilities	332,780,791
Total liabilities	2,484,942,452
STOCKHOLDERS' EQUITY	
Capital*	66,146,316
Reserves	93,214,711
Profit (after taxes)	99,101,733
Total stockholders' equity	258,462,760
Total liabilities and stockholders' equity	2,743,405,212

*Convered at TL 755.90=US \$1.00

Capital has been increased to US \$ 158.8 million as of March 1987

AKBANK has shown a distinctive line in the banking scene towering in figures and ranging in activities.

With a dedication to increase its equity continuously AKBANK more than doubled its capital from TL 50,000,000,000 (US \$ 66.1 million) to TL 120,000,000,000 (US \$ 158.8 million).

Still holding its position in Euromoney's list of top 500 banks, AKBANK has been recently appraised as one of the top 40 banks of the world by return on equity and assets.

However, figures aren't all.

In its course of action, AKBANK offers the full means of a leading bank in and beyond the country.

In addition to its branches and representatives in the world business centers, AKBANK owns the only Turkish financial subsidiary abroad -Ak International Ltd. in London. In cooperation with Banque Nationale de Paris, AKBANK has also founded a new bank in Turkey, namely BNP-AK. Bringing in international finance and banking techniques to the country, BNP-AK has successfully completed its first year of activity.

In short, AKBANK has proved to be the active bank ever growing and ever accelerating in its distinctive line.

AKBANK

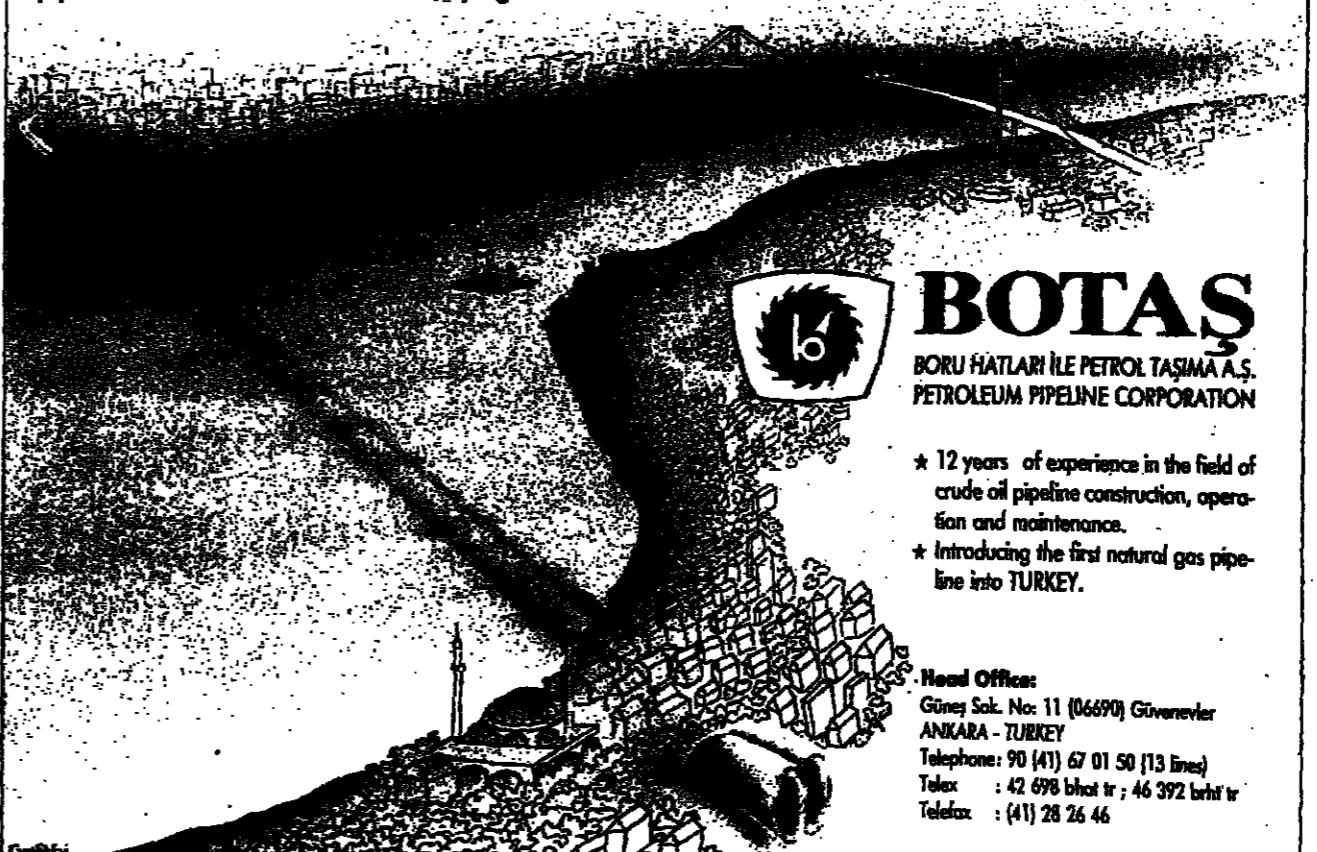
Ak International Limited

- Ak International Ltd. has completed its third full year of activities as a licensed deposit taker.
- Ak International Ltd. as of 1986, had £ 10 million paid-in capital, balance sheet total of £ 122 million and a profit of £ 2.2 million before tax.

• Ak International Ltd. is proud to be at your service for all your banking transactions.
John Herding-General Manager
10 Finsbury Square London EC2A 1HE
Telephone: (01) 628 3844 Telex: 8955636 AKIL G

VISIBLE AND INVISIBLE TIES BETWEEN EUROPE AND ASIA MINOR GO SIDE BY SIDE...

While a second bridge is under construction over the Bosphorus, BOTAS is laying a natural gas pipeline under the Marmara Sea, tying two continents even closer to each other.



BOTAS

BORU HATLARI İLE PETROL TASIMA A.S.

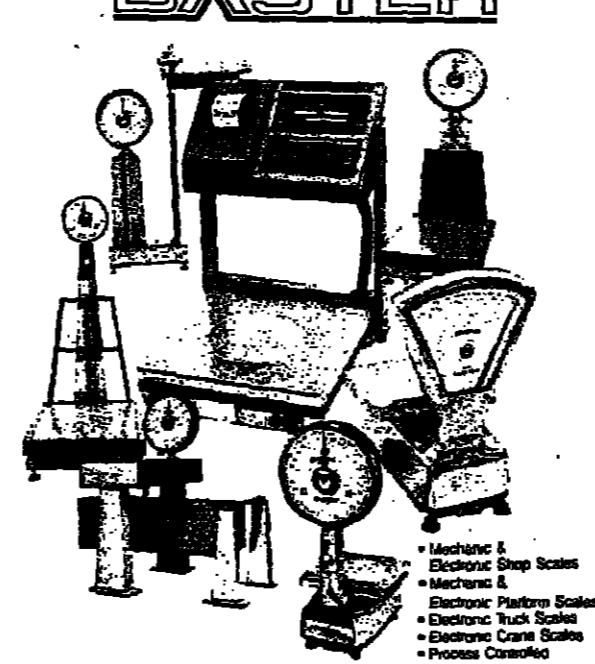
PETROLEUM PIPELINE CORPORATION

- ★ 12 years of experience in the field of crude oil pipeline construction, operation and maintenance.
- ★ Introducing the first natural gas pipeline into TURKEY.

Head Office:
Güney Sok. No: 11 (06690) Güvenler
ANKARA - TURKEY
Telephone: 90 (41) 67 01 50 (13 lines)
Telex : 42 698 botas tr - 46 392 botas w
Telex : (41) 26 26 46

from grams up to tons, from mechanic dials up to latest digital technology, source remains the same.

BASTER



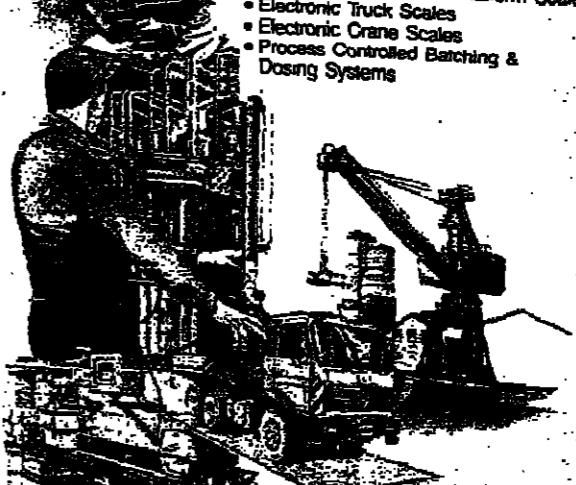
BASTER/DASITIM
BASTER DAŞITIM TAŞIT VE DAŞIT ALETLER LTD. ŞTİ.

HEAD OFFICE: 10. FLOOR, BAKIRCI CİHAN ÇİHAN TURKEY
No: 10000 Cadde No: 55, 34360 BEŞİKTAŞ/İSTANBUL
TELEPHONE: 011 525 22 22

BASTER
PIONEERS OF WEIGHING IN TURKEY

20 YEARS OF EXPERIENCE
IN WEIGHING SYSTEMS

- Mechanic & Electronic Shop Scales
- Mechanic & Electronic Platform Scales
- Electronic Truck Scales
- Electronic Crane Scales
- Process Controlled Batching & Dosing Systems



BASTER/DASITIM
BASTER DAŞITIM TAŞIT VE DAŞIT ALETLER LTD. ŞTİ.

HEAD OFFICE: 10. FLOOR, BAKIRCI CİHAN ÇİHAN TURKEY
No: 10000 Cadde No: 55, 34360 BEŞİKTAŞ/İSTANBUL
TELEPHONE: 011 525 22 22

ADVERTISING SECTION

ADVERTISING SECTION

Banking Comes of Age

TRADITIONALLY, the man in the street in Turkey has regarded banks with suspicion. Most people prefer to deal in cash, according to Mr. Bülent Berkem, deputy general manager of Turk Ekonimi Bankasi. "They are not used to checks. They don't trust them." Turkey is generally a cash-based society and old habits are slow to change.

This helps to explain why retail banking is still in its infancy. Another reason is that, until recently, deposit rates were comparatively low and inflation high. Last year, it was quoted at 32 percent. The target this year is to bring it down to 20 percent. Consequently, the banks have concentrated on building up a sound base for trade finance, crucial for Turkey's exports and the domestic expansion of industry and agriculture.

Turkish banks are also trying to recover from a rash of non-performing loans and bad debts, mainly incurred before the present government administration. For some time now, there has been a continuing shakeout of some of the weaker banks.

The most recent rescue operation has been with Töbank, the teachers' bank, for which the government is canvassing would-be foreign partners. Töbank, which began operating in 1959, is the sixth largest private bank. Its development has been very much the brainchild of Professor Sait Kernal Mimaroglu, one of its major shareholders. Töbank has been placed under the temporary trusteeship of three other banks and an insurance group, while the Central Bank looks for new partners, several of which are said to be standing in the wings.

Although Töbank's position has caused concern in banking circles, it also illustrates the fundamental change being forced on do-

mestic banks by Prime Minister Özal's protégé at the Central Bank (itself undergoing a change of name). Mr. Rüstem Saracoglu, its vice governor, regarded by most as a "bankers' man." The Central Bank is making it clear that banks must take care of their own affairs, spruce up their management, check their assets, emphasize quality services, scrutinize their portfolios, improve their deposits and develop more off-balance sheet services.

With prospects of EEC membership becoming more tangible and with more pressure from the IMF, Turkish banks are anxious to put their house in order and increase their international credibility. Says Mr. K. Erhan Dumanli, assistant general manager of Akbank, the second largest private bank in terms of assets (currently around \$2.7 billion): "We are always a little orthodox, rather conservative, and not given to risk taking."

This reflects the views of many of the more successful banks that continue to err on the banking principle of caution. In the case of Akbank, Mr. Dumanli says its bad debts are less than one percent of total credits outstanding. Net income last year almost tripled to TL 87.5 billion (\$124.7 million). In March, its capital was increased from \$66.1 million to \$158.8 million. Besides being well managed, it has the advantage of being a wholly owned subsidiary of the highly successful Sabanci industrial conglomerate.

Akbank, with 600 branches, is also setting its sights on developing a firm retail base with modern computerization. It has about 5 million customers with some 8 million accounts. By the end of 1988, it will have invested more than \$27 million in computer



The Akbank head office in Istanbul.

technology and hardware, bringing 260 of its branches on line.

"This should cover 80-90 percent of all our activities in the future," says Mr. Dumanli. Akbank has also introduced plastic bank cards, but few people use them as yet. "They still prefer cash," says Mr. Dumanli.

About 12 percent of the country's overall trade finance is now handled by Iktisat Bankasi Turk, which also plays an active role in the capital markets and in international syndicated loans.

A perceptive merchant banking operation headed by Mr. Erol Aksoy,

Iktisat has been rapidly pushing back the frontiers of banking in Turkey, developing new ways of making money that are being followed by other players in the market. Iktisat has been very active in treasury and corporate bonds.

Esbank, one of the oldest banks, is also heavily involved in trade financing.

Also sensitive to the wind of change via the microchip is Türkiye Is Bankasi, ranked by Euromoney as the largest Turkish bank in terms of net worth.

Its capitalization is due to be increased to TL 250 billion (\$317 million). The government owns 40 percent and the Workers' Pension Fund 35 percent.

It has already invested \$40 million in technology since 1980 and intends to push this figure up to \$100 million by 1990. With

Mr. Aksoy prefers to look

more than 10 million current accounts at its 930 branches, improved efficiency is regarded by Mr. Ahmet Yavuz, deputy executive general manager, as a crucial ingredient for profitability and for the preservation of its 20-25 percent share of banking in Turkey.

"We have to give prompt and efficient services and this can only be done by more computerization," says Mr. Yavuz. Ankara, Istanbul and Izmir will serve as the three regional computer centers for the bank. About 100 branches will be on line soon, and by the end of the year there will be 200 handling about 80 percent of all transactions. About 50 ATMs (automatic teller machines) will also be installed this year.

As the bank is anticipating a downturn in deposit flows, partly because of low interest rates and partly because of increased activity in public sector securities, it is developing new financial activities such as leasing, investments funds and free zone banking.

It has also intensified its international operations, making first entry into international syndicated credit markets last year when a \$150 million credit was raised in less than two weeks, without government underwriting — this was a significant step forward. With the prospect of EEC membership looming closer, Is Bank is aiming at closer links with international capital markets and further development of state-of-the-art financing techniques.

More emphasis on international markets is also being placed by Garanti Bankasi, primarily a retail bank with 288 branches. "We too are undergoing continuous change to keep abreast of developments," says Mr. Solmaz Ayarslan, assistant general manager. "We

are financing a lot of domestic trade and are now concentrating on the international side as well."

Garanti has established a project finance department aimed at attracting foreign investors to specialized growth areas, particularly in the agricultural sector. In the past, considerable emphasis has been placed on the development of manufacturing industries, which have sharply increased production.

But Garanti Bankasi believes that in the longer term, especially when the massive irrigation projects it is financing are completed (GAP and Konya are the two big ones) agribusiness activity will rise dramatically, especially in value terms.

It is also trying to increase its corporate business, but as Mr. Alkin Öngör, assistant general manager, points out, Garanti doesn't want to become a small corporate bank with retailing activities, but a stronger retail bank with a corporate side.

Also internationally audited is Türk Ekonimi Bankasi (TEB), a relatively small bank largely confined to merchant banking operations. A highly professional operation, it follows the much vaunted "cautious approach," which seems to be the hallmark of successful commercial expansion in Turkey.

"We have a very select client base and we're mainly interested in international trade finance: we don't handle any medium or long term loans beyond 180 days," explains Mr. Hasan T. Çolakoglu, one of Turkey's shrewdest young bankers and adviser to the board.

"This is a time span in which we can predict things. Beyond 180 days it is much harder as here we have a very rapidly changing situation, particularly with legislation," he says, adding that the changes are usually "for the better."

TEB has a paid-up capital of TL 7.5 billion (\$10.6 million), and its profits were up by 35 percent last year. With total assets of TL 39.8 billion (\$36.8 million), net income doubled to slightly more than TL 2 billion (\$2.9 million).

"We are probably the most liquid bank in Turkey: we are always liquid and that is the policy we like. We could probably make more moves by being less liquid, but we are in fact very conservative," says Mr. Çolakoglu explaining the bank's philosophy.

"We tend to follow: we will never be first into anything new, we're too cautious," he emphasizes again.

Mr. Harun Pasaoglu, assistant general manager of Halk Bankasi (People's Bank) also stresses caution "but we are not conservative." Commenting on last year's results, which are about to be released, he said the bank "had a very strong performance and we are probably now in first place in Turkey."

Halk was created in 1938 to finance cooperative institutions and small businesses. It has 645 branches, 14,000 employees and about 350,000 customer accounts. Last year it made credits worth nearly TL 580 billion (\$827.4 million). This year the figure will rise to TL 925 billion (\$1,319.5 million).

Mr. Pasaoglu explains how the bank works: "Basically we borrow from the Central Bank at 27 percent interest and lend to small- and medium-sized business at 30-35 percent."

A medium-sized enterprise is one with from 5 to 25 workers. This year cooperative institutions will receive TL 150 billion (\$199.7 million) credits, industrial companies TL 200 billion (\$267 million), development

(Continued on page 10)

Similar Minds Think Alike



Similar minds approach situations from the same angle.
Arrive at the same conclusions.
See eye to eye on issues.

IN TURKEY, Garanti Bankasi operates on the same wavelength as other forceful banks around the world.

We were, for example, the first big commercial bank to publish independently audited* financials — and are still the only one to do so.

That gives a clue to Garanti's aboveboard approach. We are one of Turkey's most liquid private commercial banks. We work with Turkey's top industrial groups. Our ratio of equity capital to total assets is the strongest of any big Turkish bank.

Garanti has a 40-year reputation for conservative, cautious banking. We don't believe in quicksilver flashes in the pan.

So when we decide to expand our already flourishing international business, you know we aren't doing it on the edge. We're doing it because any like-minded banker would do the same.

YOU CAN BANK ON
GARANTI

For further information please contact:
Mr. Solmaz Ayarslan
Assistant General Manager
Mete Caddesi 40, Taksim-İstanbul/Turkey
Tel: (90-1) 149 18 39 Telex: 24538 gafot
Mr. İlhan Nebioglu
131-133 Cannon St London EC4N 5AX
Tel: 626 3803/4 Telex: 8813102 gafot

*by Peat, Marwick, Mitchell and Co.

Textiles: Turkey's Star Exporter

TURKISH textiles are big business and becoming progressively bigger. But success breeds its own problems. As Turkey's textile producers have learned to export, they have run up against the kind of protectionism abroad that Western statesmen have been telling them to discard at home.

Cotton is king in the Turkish textile world. For many years Turkey has grown cotton, chiefly in the Aegean region and the Cukurova plain around Adana. Plentiful raw supplies at home (Turkey's annual cotton crop is around 500,000 million tons a year) led to the beginnings of a textile

industry more than a hundred years ago.

In the 1950s Ataturk created Sumerbank, which among other activities is still the country's largest textile producer. Development of the private sector followed in the 1940s and 1950s. The real take-off came in the late 1960s and 1970s when the private sector began investing on a large scale, growing as much as 18 percent some years.

The result today is that Turkey has become one of the EEC's major textile suppliers and is vigorously penetrating new markets all over the world. Textile exports are put at between \$1.6 billion and \$2.2 billion.

In recent years, the Turks have been discreetly playing down both their production and their export figures, fearful of stirring up protectionist responses in countries where declining textile industries do not want competition.

In 1985, Turkey's total textile exports to the United States were only \$121 million, less than 1 percent of total U.S. textile imports of \$15.9 billion. But U.S. textile producers still managed to force the imposition of quota restrictions on 65 percent of Turkish textiles sold in the United States. Similar problems have followed with Canada.

Protectionism, however,

has been a less serious problem than bad management at home. Two of Turkey's three largest textile companies went bust in the early 1980s and had to be bailed out by the government. They were typical of a large number of firms that invested too much too fast without attention to the market.

The pacemakers have been companies such as Altinayildiz (high-quality ready-to-wear), Mensucar Santral (bed linen and linings), Akin, Soktas, and many others that have put a premium on good management.

The biggest management turnaround is being attempted at the state-owned Sumer-

bank by General Manager Erkan Tapan, brought in from the private sector by the Ozal government.

Sumerbank's annual turnover is around U.S. \$400 million but, until 1984 when Mr. Tapan arrived, the corporation was living on Treasury subsidies of about TL 5 billion (\$7.1 million) a year.

Putting an end to the subsidies, Mr. Tapan decided to look to the market instead. He brought in market researchers and began an advertising campaign with the slogan "I really love Sumerbank" aimed at younger customers. He published the first catalog in the corporation's 33-year history.

From 2 TL 700 million

(\$812.4 million) loss in 1983, Sumerbank last year made a TL 22 billion (\$31.3 million) profit. "We are starting to reap the harvest of reorganization," says Mr. Tapan, pointing out that productivity is expected to rise by 72 percent in the group's spinning activities.

Meanwhile, in a side-operation, Sumerbank has put one of Turkey's bankrupt textile giants, Peknas, back in the black. Sumerbank took over the ailing corporation at the government's request but on a joint venture basis. Last year, it made a profit of TL 4 billion (\$6 million) and will eventually be repurchased.

Creations by Vakko, one of Turkey's leading fashion houses.

up regional textile resource centers, if possible with foreign institutions taking part across the country.

Equally potent medicine, though one which local producers hate, would be to relax import controls. In many areas, notably dyes and artificial yarns, local Turkish producers cannot supply to the highest quality required by exporters.

Aware of their limitations, most of the leading producers in Turkey are ac-

tively exploring the possibilities of joint ventures and partnerships with foreign companies. On the domestic market, Turkey could do with more high-quality retail chains.

In 1985, Altinayildiz broke new ground by forming a partnership with Benetton. As yet, no other foreign chain has followed the Italian company into a confusing but rapidly growing market.

— Thomas Faulkner

Filling the Energy Gap with Hydroelectric Power

TURKEY is generously endowed with everything — except energy, of which it is likely to remain a substantial importer well into the next century. Over the last decade it has imported an average of about 70 percent of its annual consumption.

On February 10, Turkey took a step toward providing for its own energy needs when the first unit of the 1,800-Mw Karakaya Dam on the Euphrates began to operate.

The dam is one of several nationwide investments that have already increased the output of electricity from 28 million Kwh five years ago to around 38 million Kwh in 1987.

The increase had to come and will have to continue. Demand for electricity has grown by as much as 15 percent in a single year over the last decade. But how is it to continue? As far as is known, Turkey has only very limited deposits of oil.

It already relies on coal imports. Lignite is the only fuel it possesses in abundance, apart from uranium.

to produce between 1,200 and 1,400 Mw of electricity.

To finance these, the government has opted for a franchise system rather than traditional project finance: the foreign consortiums will be majority partners in a joint venture with the Turkish Electrical Authority. The JVC will build and operate the plant for a period of between 15 and 26 years, recoup its costs, and then bow out by handing the plant over to the Turkish government.

So far, Eximbank, of the U.S. and the Swiss government have given their partial endorsement to the "Build-Own-Transfer" model, as it is known. However, there is probably only enough credit in world markets for one of the projects this year. Three rival consortiums, headed by Bechtel of the U.S., Brown Boveri Co. of Switzerland, and Seasac of Australia, are vying to be the first to sign an agreement.

Instead, the government has opted for giant thermal plants burning imported coal. It is currently negotiating with seven international consortiums to build power plants at coastal sites, each

providing the most important. It would provide Turkey with a large new port near Iskenderun, a stockpile of Queensland coalmines as part of the deal, and new shipping links with the Far East.

The government has also encouraged the use of the franchise model for new hydroelectric projects. It says it has had 70 applications, eight of them from corporations wanting to produce their own electricity. It has already signed a protocol with the Turkish firm Aksu for the building of a plant in Isparta with probable Chinese participation.

Many of these are challenging projects. Yavru near Kayseri, a consortium led by Sweden's Asea and Britain's John Keir, proposes to build a 200-Mw underground power station on the Kizilirmak River, a project of extreme sophistication and difficulty. But this and other projects like it are beset by delays in getting firm commitments from the Turkish government.

At Yavru, this is because a rival local consortium, led by the town's mayor and backed by politicians in Ankara, has emerged to challenge Asea. This development bodes badly for the Ozal model. International companies with worldwide reputations cannot be expected to waste time competing against local factions on highly sophisticated projects.

The worst delays have affected the Atomic Energy Corporation of Canada's proposed 630-Mw power plant at Akkuyu on the Mediterranean. AECL got a letter of intent to go ahead with the power plant in autumn 1983. But the deal was never clinched. Turkish fears about going nuclear and the Canadian government's anxiety about backing an investment of more than \$800 million apparently proved insurmountable.

Although Turkey is rich in uranium, the government line is that nuclear energy will not come here for at least another 15 years.

— Thomas Faulkner

ing loans, has been modeled back into shape by its general manager Mr. Husnu Ozegin.

The common factor in many of the ailing banks has been weak management, and Mr. Ozegin's first task was to strengthen executive management and then to introduce a number of innovations such as the first Euro certificate of deposit facility last year. He has also forged international links with a new range of banks unused to doing business with Turkey. These included Danish, Finnish and Australian banks.

While some Turkish banks are looking for niches, others have been busily restructuring. Yapi Kredi Bank, which three years ago was under considerable stress through non-performing loans, has been modeled back into shape by its general manager Mr. Husnu Ozegin.

The common factor in many of the ailing banks has been weak management, and Mr. Ozegin's first task was to strengthen executive management and then to introduce a number of innovations such as the first Euro certificate of deposit facility last year. He has also forged international links with a new range of banks unused to doing business with Turkey. These included Danish, Finnish and Australian banks.

While some Turkish banks are looking for niches, others have been busily restructuring. Yapi Kredi Bank, which three years ago was under considerable stress through non-performing loans, has been modeled back into shape by its general manager Mr. Husnu Ozegin.

We are now giving preferential treatment to export credits because the government is emphasizing this area and wants to stimulate more exports," comments Mr. Paszoglu.

Although Turkey is rich in uranium, the government line is that nuclear energy will not come here for at least another 15 years.

— Thomas Faulkner

While some Turkish banks are looking for niches, others have been busily restructuring. Yapi Kredi Bank, which three years ago was under considerable stress through non-performing loans, has been modeled back into shape by its general manager Mr. Husnu Ozegin.

We are now giving preferential treatment to export credits because the government is emphasizing this area and wants to stimulate more exports," comments Mr. Paszoglu.

While some Turkish banks are looking for niches, others have been busily restructuring. Yapi Kredi Bank, which three years ago was under considerable stress through non-performing loans, has been modeled back into shape by its general manager Mr. Husnu Ozegin.

Total Integration in Glass Industry...

MAIN PRODUCTS GROUP

FLAT GLASS GROUP

- Flat, Fournault and Pittsburgh Processes
- Safety Glasses (toughened laminated)
- Double coated mirrors
- Insulating glass

TABLEWARE GROUP

- Lead crystal
- Hand made & machine made tableware
- Fine porcelain
- Heat resistant kitchen & tableware

FIBERGLASS GROUP

- Plastics reinforcement fibers
- Polyesters

MATERIALS GROUP

- Soda ash
- Sodium borohydride

CONTAINER GROUP

- Bottles (including sleeve application)
- Jars

Fourth Largest Glass Producer in Europe: SİSE-CAM

Our group (briefly referred to as "Sise-Cam") is active in every aspect of glass business from producing raw materials to manufacturing, marketing and exporting a broad range of finished products.

Fifty years of experience has provided us with highly intensive production technology and a vast accumulation of know-how.

The Group has grown into no less than an international glass giant, producing, among other more conventional items, jumbo size float glass, employing latest glass melting and manufacturing technologies, one-way, light-weight soft drink bottles, mouth-blown, hand-cut fine stemware in lead crystal and special reinforcement fibers for advanced GRP processes.

Sise-Cam employs some 16,000 people, and its total glass production is 600,000 tonnes/year. We are exporting our goods to 58 countries in 5 continents — \$170 million worth of goods annually.

With its financial, commercial and technological expertise an ideal partner for business in international markets: Sise-Cam. A name to remember.



Türkiye Sise ve Cam Fabrikaları A.Ş.

Head Office: Camhan, Barbaros Bulvarı, Beşiktaş-İstanbul Phone: (1) 172 72 00 Telex: 26 963 PCAM TR.



TOTAL CAPABILITY OFFERED AS YOUR TRADING PARTNER IN TURKEY

The Istanbul-based EDPA is a major international trading house backed by a powerful industrial group with a banking institution under its control

Currently, the top fourth exporter of Turkey with an annual turnover at around the mark of \$ 200 million, EDPA is an internationally geared efficient company capable of offering best import-export prospects to its business associates.

EDPA is prepared for jointly using various trade options available in Middle East and North Africa. Likewise, EDPA looks forward to joint operations within the framework of projects for the promotion of Turkish commodities and services in Americas and Far East. The full scope of services proficiently extended by EDPA may be of most mutual advantage in product lines such as:

● TEXTILES

A wide range indeed covering the main categories of yarns, woven fabrics and ready-to-wear clothing.

● FOODSTUFFS ● IRON AND STEEL ● MINERALS ● FOREST PRODUCTS ● CHEMICALS ● MACHINERY AND SPARE PARTS

● A WIDE RANGE OF OTHER INDUSTRIAL PRODUCTS

Please contact us, if the question is to associate with a partner of established reputation and proven performance for any trade transactions with Turkey



HEAD OFFICE:

EDPA PAZARLAMA A.Ş. Hizmet Geregi Caddesi No: 126 Tsvikite, İstanbul - TURKEY
Tel: (1) 141 65 10/11-12-13; Tel: 22006 edit; Fax: (1) 148 64 26

INTERNATIONAL GROUP COMPANY AND PARTICIPATIONS:
AKED A.G., Basel-SWITZERLAND Tel: (61) 333063, Tel: 63662 aled ch
EDPA DEUTSCHLAND GmbH, Düsseldorf-W.GERMANY, Tel: (211) 320877, Tel: 8586219 edpa d
EDPA ITALIA SRL, Milano - ITALY, Tel: (39) 469 14 32, Tel: 842162 tsch
EDPA USA INC., New York - U.S.A., Tel: (212) 214 0644, Tel: 6711408 edpa n

100% COTTON

ADVERTISING SECTION



Mr. Vehbi Koc, now honorary chairman of KOC Holdings, became the first Turk to be nominated World Businessman of the Year by the International Chamber of Commerce at their 29th congress last February in New Delhi.

From Grocer to Premier Industrial Magnate

BUSINESSMEN talk about the three key industrial sectors which make up the Turkish economy — the state, the private sector and KOC, the oldest and largest privately owned conglomerate in the country. Ask anyone to name an internationally known Turkish company and more than likely it will be KOC, if the question does not draw a blank response. Most people outside Turkey have yet to realize the dramatic changes that have been taking place in Turkish commerce and industry, especially during the last five years.

But KOC, founded in 1926 by Vehbi Koc, the son of a small-time Ankara gro-

cer, is an exception. Its development began just before the founding of the Republic in 1923. To some extent the story of KOC is the story of the growth of modern Turkey.

With more than 116 companies in the group, KOC has interests in almost every sphere of activity in Turkey, from automobile manufacturing to the travel industry and, most recently, banking. It has operations in the United States, West Germany, Italy and Switzerland. It has joint ventures throughout the world with blue chip companies, including General Electric, Ford, Fiat, Siemens, Goodyear and American Express. It also has close links with Toshiba, Hitachi,

Ricoh, Burroughs and Ivec.

Last year's turnover rose dramatically by more than 52 percent to U.S. \$3.4 billion and the company has now been placed in the top 200 of the "Fortune 500" list of top companies in the world outside of the U.S.

Mr. Vehbi Koc, at 86, is now honorary chairman of KOC Holdings, and still puts in a hard day's work at the office, often as long as 12 hours. When speaking of his early days at the Ankara grocery store and the birth of his empire from such modest beginnings, he likes to cite the example of other successful pioneering entrepreneurs who have created multinational enterprises such as Ford, who started as

a car repairman, and Siemens, who started as an electrician. Today his son, Rahmi, heads the Koc empire as its new chairman.

According to Mr. Tugrul Kudatgobili, the group's communications director, Mr. Vehbi Koc is known to be cautious, a much-used adjective in Turkey's business community today. But for Koc, it has been a byword from the very beginning — 1928 — when he took on the first Ford dealership.

Soon after the Ford dealership, he took on the representation of Standard Oil (later to become Mobil Oil). From his early days, Mr. Koc has always had an eye on the international scene — something no one

has forgotten — and is now one of the strengths of an empire that has become a sine of Turkey's domestic economy.

In 1963, a major step toward the institutionalization of the company was the creation of KOC Holdings. This was Turkey's first holding company, and the first to go public. With his son now

chairman and three daughters on the board, continuity seems assured.

Mr. Koc has also played an important role in what he describes as his "civic responsibilities." He has helped to establish schools, hospitals, student dormitories and libraries, and sponsors scholarships through the Vehbi Koc Foundation.

Institutionalism, professional management and the recognition of social and cultural responsibilities by successful businessmen are the three basic principles that govern Mr. Koc's life.

He told the members of the ICC at their New Delhi Congress: "The harmony of these principles has brought me to where I am today."

Turkish Capital Markets

THE first half of 1987 has seen major advances in Turkey's capital markets, as the government and Central Bank

try to provide the institutional underpinning for a financial system which, over the next decade, will sustain performance by Turkish industry.

The first issue of commercial paper in Turkey, TL 500 million (\$64 million), for Henkel Chemical, handled by the Yapi ve Kredi Bankasi on February 10, is one of a series of landmarks.

A month earlier the Central Bank had introduced Open Market operations. In December 1986, the Istanbul Stock Exchange had reopened along new lines. On April 2, 1986, the Central Bank launched its own TL Interbank system, for which it acts as a broker.

Why should Turkish investors dislike stocks? There are several reasons. One is simple unfamiliarity, but another is a deep-rooted feeling that in a strongly family-dominated business environment, minority shareholdings do not count for much.

Since then it has used increasingly sophisticated techniques to market Treasury Bonds, designed among other things to encourage the growth of a secondary market. One of the first big steps forward was the introduction of an auctioning system for Treasury Bonds in May 1985, intended to help establish a market level for interest rates which had previously been determined by governmental fiat.

These innovations in the money markets are taking place within a timetable programmed by the government and the Central Bank, whose vice-governor, Dr. Ruzdi Saracoglu, has played a key role in setting up the new institutions.

The emphasis on money markets is a result of the heralded introduction of realistic interest rate policies in 1980. Until then, Turkish industrialists never had to worry about funds. Banks lent freely to industry at rates which were well below inflation. Much lending was done inside groups. Even today, all but a few of Turkey's major private banks are owned by industrial groups.

The following steps have been taken to rebuild it:

1). The introduction of a new legal framework. For example, the Istanbul Stock Exchange has given great importance to guaranteeing investors against fraud.

2). The emergence of younger, usually U.S.- or European-trained financial executives familiar with the workings of modern financial markets.

3). A partial fall in inflation and an accompanying lowering of interest rates on bank deposits and Treasury Bonds. This seems to have been achieved rather deliberately.

Though independent auditing is chiefly confined to a few top exporting groups, the market does know a great deal about the state of health of major companies

— or thinks it does.

However, the task of transshifting savings into industry is potentially a risky one, with many firms known to have heavy burdens of bank debt. In the short term, banks will probably be expected in practice to guarantee issues they sell to the public. The growth of a risk-taking sizable secondary market is probably still several years away.

— Thomas Faulkner

Free Trade Zones to Facilitate East-West Commerce

WE are a one-stop free trade zone agency and the gateway to and from Europe," is how Mr. Timucin Sanalan, director, sees the new Free Trade Zones which are being created by the Turkish government to boost exports and imports.

The creation of free trade zones is part of the overall government policy to liberalize the economy, encourage more inward investment and develop the export market. Turkey's geographical position puts it in a prime

spot for commercial and manufacturing "off-shore" operations. It is the natural distribution center for eastern Mediterranean countries, southern Europe, the Bal-

kans, the Levant, North Africa, the Middle East and even Pakistan and India. With the second Bosphorus Bridge nearing completion and the recently signed agreement to go ahead with a third bridge, Turkey can hardly be better placed as the natural "bridge" between east and west.

The government has agreed to go ahead with the creation of four separate free trade zones. Two, at Mersin and Antalya, will be functioning at the end of 1987 or early 1988.

"The infrastructure in these two zones already exists; more than 200 companies have signed up to go to Mersin and about 100 to Antalya," says Mr. Sanalan. Foreign companies which

have been granted licenses include Conagra and Dresser Industries from the United States, Rothman's from Britain and Mannesmann from West Germany. "Although we have done practically no promotion abroad we have so far received more than 65 firm inquiries for leases from companies in the United States and Japan, and more than 20 of them have been accepted," adds Mr. Sanalan.

Two Turkish banks and two foreign banks have also been given licenses to operate from the zones. According to Mr. Sanalan, the banks will not only be involved in trade finance, they could also be the beginning of Turkey's offshore banking sector.

The free zone projects have been given a big boost by the arrival on the scene of the giant U.S. Bechtel Corporation. Bechtel has now signed an agreement to plan and operate a free zone at Yumurtalik. This has been done under Prime Minister Turgut Ozal's innovative build-operate-transfer (BOT) scheme for funding large-scale projects (the Bosphorus Bridge, for example).

Bechtel's intervention has boosted international confidence in the free zone strategy not least because Bechtel is negotiating a BOT agreement for a \$400 million commitment for the Tekirdag thermal power station project, and its financial subsidiary is supporting part of the \$480 million transcontinental highway project.

Martin Marietta International is one of the foreign

companies planning a high-tech production facility at Antalya. Mr. Sanalan refutes comments made in some business quarters that not much progress is being made and points out that the government has so far invested TL 15 billion (\$21.3 million) in Mersin and Antalya. "In addition, the successful applicants are investing TL 100 billion (\$133 million) and there is another TL 200 billion (\$266 million) going into Mersin."

More than 500 applications for sites in Mersin and Antalya were submitted — three times more than could be accommodated and there is now a waiting list of 100 applicants.

• **Rents:** Very low cost leases, about \$2 a square meter. • **Employment:** Strikes or stoppages forbidden for a period of up to ten years. • **Finance:** Trade finance from banks operating within the zone at preferential rates. • **Administration:** Apart from the initial application for an operating license to the State Planning Office, all other administrative details are dealt with directly by the relevant free zone directorate.

Commenting on the overall advantages of the four Turkish free trade zones, Mr. Yalcin Alaybeyoglu, chairman of the Free Zones Directorate, says: "For potential investors the Turkish free zones are the most attractive in the Mediterranean. However, the prime factor that determines the success of free zones is the availability of investors capable of generating a sufficient volume of business in these zones. Mersin and Antalya have passed this test with flying colors."

A VERSATILE TEXTILE SUPPLIER YOU CAN RELY UPON

A name of distinction in the Turkish textile industry.

AKIN TEKSTIL

produces 100% cotton, polyester-cotton, polyester-rayon or linen blended yarns and woven fabrics as well as ready-to-wear clothing.

A wide spectrum of high quality goods bearing the reliable AKIN TEK Label are exported all around the World.

AKIN TEKSTIL

is a textile leader which offers best possible prospects to its associates.



AKIN TEKSTİL

ANONİM ŞİRKETİ

Ciğerci, Vakıf Mah. 44. Cad. 14. No: 1400 İstanb. TURKEY
Phone: (011) 571 11 11 and (011) 570 27 80
Telex: 287 12 akin te-Fax: (011) 543 50 82
Cable: AKINTEKS İSTANBUL

FIVE GREAT HOTELS IN THREE BIG CITIES OF TURKEY

***** Hotel Etap Marmara

Phone: 151 46 96 Telex: 21137 marmar Fax: 144 05 00

***** Hotel Etap Altin

Phone: 200 32 35 Telex: 44419 etap tr Fax: 200 23 30

***** Hotel Etap Istanbul

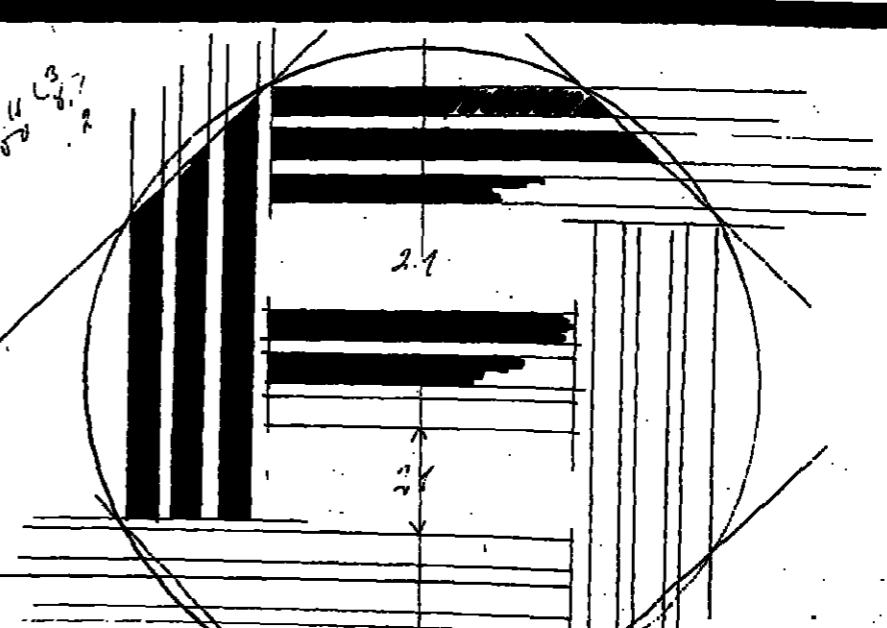
Phone: 151 46 46 Telex: 24 45 61 etap tr

***** Hotel Etap Izmir

Phone: 14 42 40 Telex: 52460 etap tr

***** Hotel Etap Mola

Phone: 151 98 65 Telex: 42294 etap tr



FINICKY ABOUT DETAILS

In international trade financing it is the details that count.

At ESBANK we thrive on detail.

We think that's what gives us the advantage over other banks.

We operate on a worldwide basis, and we know the proper channels to use,

the right guarantees to accept.

We know how to overcome little

hitches that may come up, for

international trading to be full of

pitfalls, if you don't watch out

for them.

Also, to know the local laws is never enough.

You have to comprehend the mentality

and the many local factors that may

affect the outcome of your operations.

Because

we're operating in a familiar environment

we can move fast on your behalf.

That is exactly why

we are finicky about details.

The faster you get in touch with us,

the faster we can watch out for you, too.



ESBANK EŞKİŞEHİR BANKASI T.A.S.
HEAD OFFICE İSTANBUL CAD. 65/1. MERKEZ MAH. 3. BEYOĞLU/İSTANBUL-TURKEY
Telephone (011) 452 59 - 143 24 02 - 151 37 19 - 149 03 69 - 149 13 21
Telex: 24 535 esbank tr - 25 381 esbank tr - 25 558 esbank tr

ADVERTISING SECTION

ADVERTISING SECTION

Agriculture: Key Element in Modernization

PRIME Minister Özal's government is belatedly coming to terms with Turkish agriculture. Since coming to power in 1983, it has been so concerned with liberalizing other sectors of the economy that agriculture, the basis of Turkey's wealth, has sometimes appeared to be ignored.

In a way, the sheer size and viability of Turkish agriculture has meant it could look after itself. Even today, roughly half its population are farmers and Turkey is one of the world's largest wheat producers. Unlike its Middle Eastern neighbors, it is self-sufficient in most crops, of which it has an abundant variety. It enjoys a number of different 'agro-ecological' zones, ranging from the plateaus of the interior (ideal for cereal production) to the sunny Mediterranean coast where bananas and citrus fruits are grown.

Yet agriculture's share of the GNP has fallen steadily from 18.9 percent in 1984 to 17.5 percent in 1985 and 16.6 percent in 1986. By the end of the current five-year plan

in 1989, it will contribute only 13.7 percent of the GNP. Agricultural exports, which in 1984 were U.S. \$1,748 million, dipped slightly to \$1,719 million in 1985 and \$1,331 million for the first ten months of 1986 (\$1,597 million on an annualized basis).

To a large extent this reflects the progress made by other sectors of the economy. Agriculture's share of the GNP has fallen because that of others has grown.

Industry has developed spectacularly, and with it, the agro-industry. Exports of processed agricultural products have risen from \$209 million in 1980 to over \$1 billion today.

More significantly, as a result of the government's general liberalizing tendency, agricultural imports have increased. Over the single year 1983 to 1984 they tripled from \$138 million to \$417 million. In 1985, according to unofficial figures, they grew to around \$1 billion. These imports, largely wheat, soybean and wool, have been absorbed by the country's burgeoning agro-industries. But it is doubtful



Lemir, a progressive agricultural development area.

that they have yet done much to stimulate domestic agriculture. Indeed, in a turnaround of its accepted policy on economic liberalization, the government has imposed curbs on agricultural exports to keep back domestic output for local industrial production. In January, it levied surtaxes of between 20 and 35 cents a kilo on exports of prime Aegean, Antalya and Cukurova cotton for this very reason.

Now, perhaps stimulated by the prospect of general elections next year and the need to hold the vote of that half of the population that lives and works in the countryside, Ankara is belatedly turning its full attention to agriculture.

Guided by the World Bank in many respects, the government is, to its credit, adopting a comprehensive grass roots approach to its task. The key to improving agricultural output is seen as stimulating the peasant farmer to produce more. It is not just a matter of providing the right price stimuli.

Rather it involves restructuring the whole rural sector for efficient production.

provision of credit to 15,000 small farmers.

An important component in the project is the improvement of animal health and breeding services. Throughout Turkey, emphasis is currently being placed on dairy production and the fattening and breeding of sheep and cattle.

The Erzurum rural development scheme also highlights two other factors, often neglected by Turkish agriculture in the past — credit and water.

The main vehicle for agricultural credit, the Ziraat Bankasi or Agricultural Bank, has until recently been held back by restrictions on its lending. Since 1983, it has been to the market three times — and will return again this year — to raise additional funds, largely to finance export goods produced by cooperatives.

In December, Arab Banking Corporation, Gulf International Bank and Bankers Trust International leadmanaged a loan for the bank, which was increased from \$150 million to \$200 million, still oversubscribed.

As for water, it is not that

Turkey lacks resources; sim-

ply that it has not used them efficiently. Now the government is investing not only in small-scale irrigation projects in the countryside, but also in the vast Euphrates Valley development scheme, and its related \$4.2 billion Ataturk Dam, which should make 700,000 additional hectares in southeast Anatolia cultivable for wheat, cotton, sugar beet and other irrigated crops by the early 1990s.

Underlying many of the new ideas floating round the Ministry of Agriculture, headed by much respected Hulusi Dogan, and the State Planning Department, is an understanding that reforms of the kind started in the last

two years are needed if Turkey is to be successful in its application to join the EEC. An inefficient peasant-based agricultural system may be too difficult for the Common Agricultural Policy to absorb. However, the solution is not simply thoughtless mechanization as practiced in the 1960s. This could lead to an unacceptable influx of deracinated small farmers into the cities and to social unrest.

Ultimately, in coming to grips with agriculture, Ozal, with Dogan's help, is tackling the most sensitive and important part of his mission to modernize Turkey's economy.

— Andrew Lyett

Construction Boom Seen as Boost to Economy



Major road construction in Istanbul is being designed to ease the traffic congestion.

TURKEY is becoming the construction mecca of the Middle East and Europe as the country undergoes what may be the biggest visible change since classical times. The second Bosphorus bridge, costing \$551 million, is to be completed in 1988 and a letter of intent to build a third bridge has been signed by the British-based contractor Trafalgar House; new ports, factories and warehouse facilities are going up at some of the new free trade zones; a huge pipeline will soon carry Soviet gas to several electrical generating stations; the final stages of the Europe-Asia highway are under construction; and new dams and hydro-electric schemes will eventually help to triple the country's agricultural production.

The main center of current activity is Istanbul, which is bursting with a population of more than 6.5 million. Following a paralyzing spring snowfall, the worst in a century, Mayor Bedrettin Dalan is more determined than ever to continue modernizing the city, which spans both the Golden Horn and the Bosphorus.

The streets are being ripped apart for stormwater drains and tunnels, telephone and telex lines are being laid underground. The Swedish group ASEA and the Construction Center are joint partners in a project for a new light metro, and another Galata bridge is being built across the Golden Horn. It will join three other bridges and greatly ease peak hour congestion. Dozens of new car parks are to be built to ease the traffic congestion which plagues the city.

But most important of all, according to the mayor, is the big clean-up of the stagnation waters surrounding the nearly tideless arm of the Bosphorus around the Golden Horn itself. Pollut-

ing industries, mostly small factories, are being closed down and moved, and "clean" coal is being imported to alleviate air pollution, one of the worst in Europe.

"We need a lot of infrastructure here and when we get it, Turkey's credibility will also be increased," says Mr. Sanki Tara, chairman of Enka Holding Investment Company. Enka has just signed a letter of intent with Trafalgar House to build the third Bosphorus Bridge, now regarded as an essential development to meet the increased transportation needs of the country. The bridge is expected to pay for itself in tolls in only six or seven years.

Enka, which has existed for 30 years, has about \$4.2 billion worth of construction projects in hand. Because of the Soviet gas deal, Enka is now looking closely at market opportunities in the construction of hospitals and hotels.

Another company that is looking to the Soviet Union is Gama, which has joined with five other companies — Entes, Guris, Kiska, Kutluatas and Pet Petrol — to form the MIR consortium early this year. A second consortium consists of Dogus Isasat, Alarko and Yukset Isasat. Also interested in bilateral trade opportunities are: Garanti Isasat, Sezai Turkes-Fevzi Akkaya, Teser and Soyak.

Mr. Ergil Ersu, Gama's managing director, says that the MIR consortium has

modeled itself on the Finnish group Finn-Seroi, which has carried out more than \$1 billion worth of projects just over its border with the Soviet Union under a similar long-term deal.

Like the Finns, Mr. Ersu is proud of the fact that Gama always completes its projects on time, always an essential prerequisite for a contract with the Soviet Union. "Also we have never had a labor dispute for 30 years, which is a pretty good record."

"This is potentially a big new market for us," says Mr. Ersu, who hopes that MIR will soon go ahead with four hotels and one hotel restoration project.

Last year Gama had about \$300 million of contracts in hand, and profitability rose by 70 percent to TL 4.3 billion (\$5.7 million).

It is involved in many other hotel projects, regarded as investment incentives under existing legislation which permits hotel construction expenses to be tax deductible.

Gama, a private company

feels it might act as a financing catalyst for other institutions in Japan and Britain.

Although there has been a downturn in Middle East business (the Turks had \$20 billion worth of contracts over the last five years), Mr. Nuretin Kocak, chairman of the Turkish Contractors Association, believes that strategic funding will help them get more work in the future. With the help of financing from the Islamic Development Bank, he estimates that Turkish contractors should be able to get about \$10 billion worth of new work in the next two years.

TO DEVELOP YOUR BUSINESS
LOOK FOR A LEADER

TURKEY. TREASURE OF AGIBUSINESS

As a banker, businessman or investor with an open eye for good and safe return you cannot pass by Turkish agribusiness.

T.C. Ziraat Bankasi, Turkey's leading bank, leads you into new business opportunities in Turkey.

Just ask the biggest bank for detailed information and advice. T.C. Ziraat Bankasi, providing a window to agribusiness and international trade financing, is the oldest and largest bank in Turkey, comprising a 25% share of the Turkish banking sector.

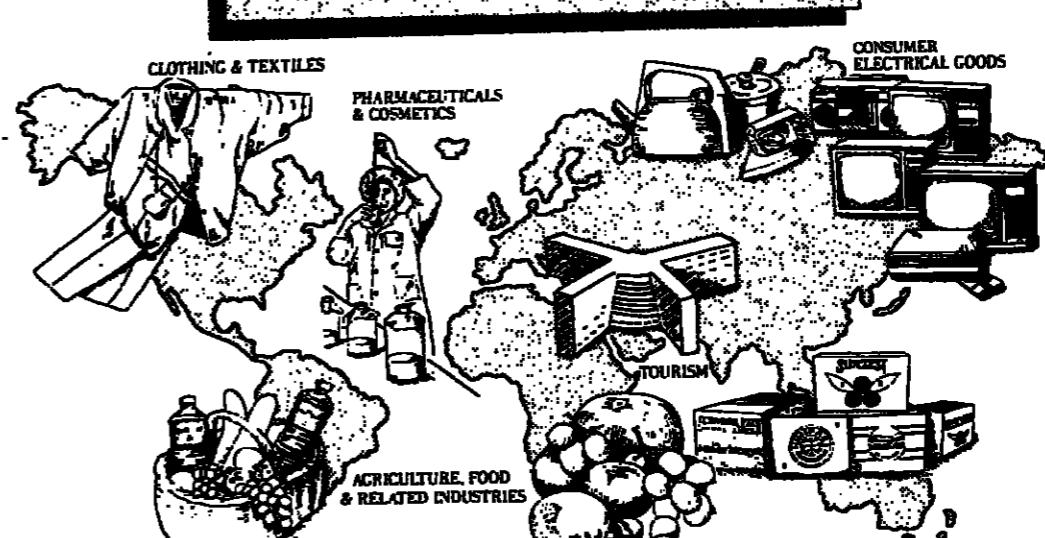
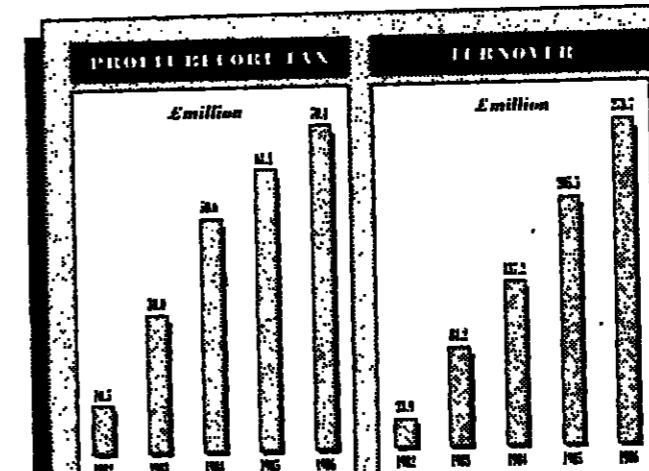
It has 1,200 branches in Turkey, one in New York, U.S.A., one in London, England and representative offices in Europe and the Middle East.

T.C. Ziraat Bankasi ranks among the world's top 300 banks with assets more than \$5 billion.

And last but not least, T.C. Ziraat Bankasi is the key to agribusiness opportunities, commerce and industry.

**TC ZIRAAT
BANKASI**
"The oldest and the largest
bank in Turkey."

Head Office - Ankara Telexes: 44217 zb un tr 44218 zb ho tr
For New York Branch Telexes: 236658 zb ny ur 662509 zb ny ur
Bahrain Telex: 7186 zc zb bn. London Telex: 887582 zb an kg
Frankfurt Telex: 41 36 31 zb an fd.

A YEAR OF SIGNIFICANT
ACHIEVEMENT

Polly Peck International PLC has worldwide operational, sourcing and marketing areas strategically located in Europe, the Near and Middle East, the Far East, the United Kingdom and the United States of America and is continuing to develop the international scope and balance of its activities.

**POLLY PECK
INTERNATIONAL PLC**

NEW YORK • LONDON • TURKEY • NORTHERN CYPRUS • HONG KONG

REGISTERED OFFICE: 41-41 COMMERCIAL ROAD, LONDON E1 1RD TELEPHONE: 01-377 0000 TELEX: 881467/894046



Considering TURKEY?
300 pages of essential facts and
commentary from Metra Consulting Ltd's
leading business research

ORDER FORM

To Metra Consulting Ltd,
1 Queen Anne's Gate, SW1H 9ET
Please send the Metra Turkey
Report Cheque enclosed £240/£395

Name: _____

Organisation: _____

Position: _____

Address: _____

Tel No.: _____

metra MARTECH

ZIHNI
GROUP OF COMPANIES

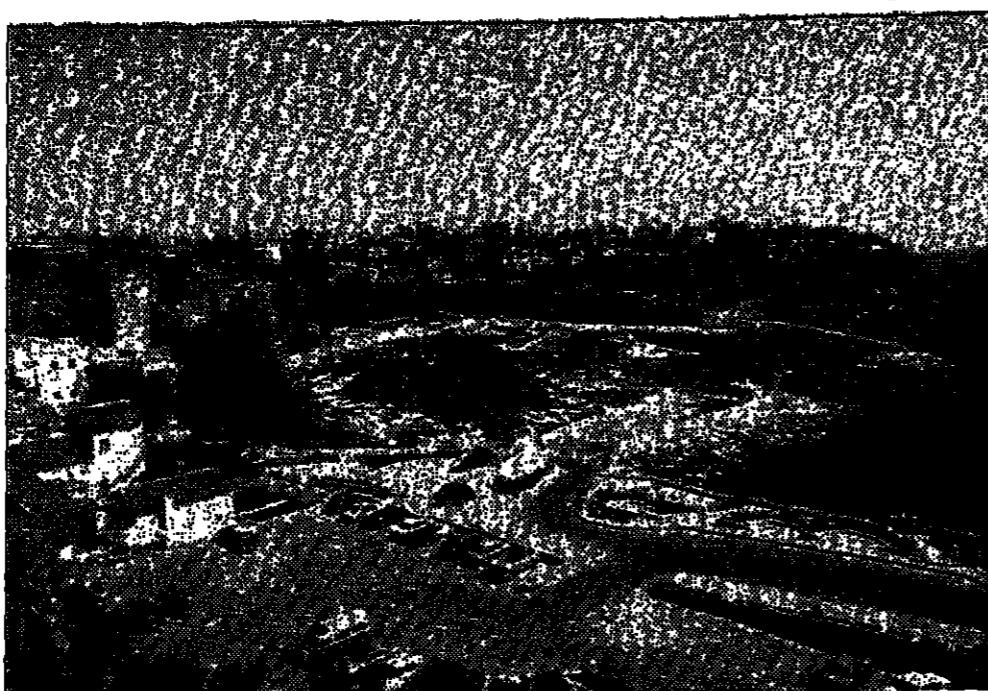
INTERNATIONAL MARKETING • COMMODITIES TRADE • INTEGRATED SEA AND LAND TRANSPORTATION • SHIPPING AGENCY
CHARTERING • SHIP MANAGEMENT • SHIPBREAKING • TOURISM AND TRAVEL • DATA PROCESSING • COMMUNICATION SYSTEMS

Istanbul Cad. 2200 No: 26/11 Tophane, Istanbul 34360 Turkey
Phone: 312 515 7010 Telex: 202 51111111 Fax: 312 515 7011

Investing in Tourism or How to Enlarge the Welcome Mat

TURKISH history encompasses 20 civilizations, yet the country is now on the threshold of the biggest invasion ever. Yes, the tourists are coming. At present, it is the most unspoiled tourist destination in the Mediterranean with only 2.3 million visitors last year. Now, the government has embarked on a major program to upgrade tourist infrastructure, attract more visitors and make substantial contribution to the balance of payments position. Foreign investors are being wooed with the promise of a wide range of incentives to build hotels, marinas and leisure facilities suitable for the international market.

"We are after the mass middle-class tourist market, the charter groups and so on," declares Mr. Gültkin Öskan, deputy under secretary of the Ministry of Culture and Tourism. "With our 8,000 kilometers of coastline and four varied seasons, we can offer every kind of tourist attraction, and



Antalya's restored old harbor, one of several major marina developments.

there is a tremendous potential here."

With his colleague, Mr. Zülfü Önder, deputy director general of tourism, he outlines some of the key facts about the industry. "The government is now planning a major increase in hotel bed capacity. We now

have just over 102,000 beds, and, by the end of this coming June, this will have risen by another 10,000. At the end of the year, we hope to have a total of 118,000 beds," says Mr. Öskan. The ultimate target is 200,000 beds by 1990. A more ambitious target in the next de-

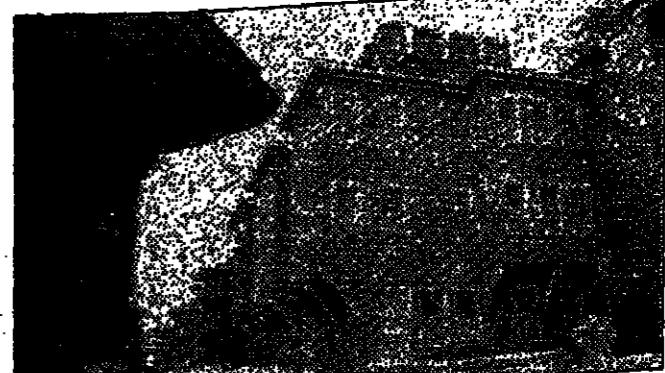
cade is more than 590,000 beds.

This year the government is investing TL 7 billion (\$9.3 million) in tourism. It has already spent TL 21 billion (\$29.2 million), mainly on roads and services, in southern Anatolia. The government has devised a tour-

ist master plan for the southern coast with three regional plans based on areas around Antalya, Kocayigit and Side. These three tourist development zones offer special incentives for foreign investors and their local partners who can acquire land on 49-year leases with extremely favorable financing (15 years credit for up to 75 percent of the total investment). Other incentives in the package include tax-free holidays and other fiscal benefits.

Considerable emphasis is being put on upgrading existing harbor facilities for yachtsmen and constructing new marinas. Two are being built at Kemer (Antalya). Other marina developments include Cesme, Kusadası, Bodrum and Marmaris. Development of facilities at Datca, Fethiye, Kas and Side are being studied. In the coming season there should be more than 2,000 berths available for visiting yachtsmen.

Major tourist investments underway at the moment



Ayasofya Pansiyonları, restored wooden houses recently opened to tourists at Topkapi Palace, Istanbul. A double room costs U.S. \$90.

with foreign partners include: Club Mediterranee, with sites at Kusadası, Foca, Göreme and Kemer, British Petroleum, with a chain of 10 motels, the Swiss group Conodex, with a hotel project at Bursa, United Breweries of Denmark, with hotels at Cesme and Yasar, and the Belgian Unit International, with a holiday village at Kiziltepe.

Many of the leading international names in the hotel and tourist business are involved in new projects in Turkey — ETAP, Meridien, Ramada, Hilton and Sheraton, British Commonwealth Shipping Co., Sanbad Development Co. and Kumagai Construction have a joint project to convert the Ciragan Palace into a deluxe hotel in Istanbul. Another conversion project involves the old university building near the Sheraton in Istanbul which is to be managed by the Hong Kong hotel group, Regent. This is a joint venture with İkinci Bank and Eski Construction company.

Mr. Özkan, of the Tourist Ministry, emphasizes the importance of tourist earnings, which last year amounted to \$1.4 billion, a slight fall over the previous year due largely to a drop in the number of tourists following the American raid on Libya and the Soviet nuclear plant disaster at Chernobyl.

Of the 2 million tourists last year, the largest number, 19 percent, came from West Germany, followed by Britain with 17 percent.

— Lee Voysey

Auto Industry Focuses on Domestic Market

LONG with much of the world's auto industry, Turkey has suffered from fluctuations in the price of oil and a rise in the value of the deutschmark and the yen. Local exports have suffered from the Iran-Iraq war. Only about one tenth of the 140,000 vehicles produced now go for export. With a population of 50 million, Turkey represents a big potential market for the world's auto industry for passenger cars, trucks and agricultural machinery. Only two people out of every 100 own a car.

Turkish automakers, as well as much of the general engineering and manufacturing sector, have suffered in the past from lack of capitalization and efficient machinery and technology. In the past, it has favored Italian know-how and the Tofas replicas of the Fiat 131 and the older 124. Best sellers are the Murat Dogan and Murat Serce with 53 percent of the market. Last year, production topped 42,000, with TOE-made Renaults in second place with nearly 33,000. Other manufacturers who assemble autos include Ford, Peugeot and General Motors. Total car production last year was 82,000.



The Murat Dogan by Turkish Fiat.

(Ford in 1928), has had a joint venture with Fiat to manufacture agricultural machinery since 1964 when the Turk Tractor factory opened in Ankara.

Three years later Fiat granted a license to Otoyol Sanayi A.S. to assemble trucks and buses. During the 1970s a series of joint ventures for auto part production were started, and, in 1978, Fiat licensed Tumosan to produce large diesel-engined tractors.

Nevertheless, imports are beginning to rise and in 1986 nearly 9,000 cars worth \$36 million came into the country. In the same year, imports of trucks were valued at \$47 million and of tractors \$36 million.

The auto industry is relatively new in Turkey — the first car was only produced 20 years ago when Otosan, the Ford concessionaire and part of the KOC group, began to assemble the first national car, KOC, which was the first company to hold a foreign car sales franchise

compared to 61,000 in 1985, and 4,000 in 1970.

At present the passenger auto industry has a ready domestic market with customers having to wait up to six months for a car. Commenting on the current situation, one banker said it was partly due to a consumer spending phase as interest rates were low and there was no direct encouragement for them to save.

In 1984, restrictions on imported ready-built foreign cars were lifted, but this has made little difference to the consumer market as tariffs and surcharges continue to more than double the price compared to locally made vehicles.

Because of underutilization of capacity, the truck and tractor sectors are now in considerable difficulty. In 1985, minibus production was only 70 percent of capacity while that of tractors fell to 29 percent, and a major rationalization of the agricultural machinery sector

is on the cards. Fiat, Renault and Ford all make tractors no longer produced in their own countries.

Meanwhile, the component side of the auto industry has been growing rapidly with more than 1,000 different companies involved making replacement spares and original equipment. In the late 1970s Tumosan was set up to make diesel engines under license from Daimler-Benz, Fiat, Volvo and Mitsubishi. Since 1982, Ercan has been making truck engines for Man at the rate of about 8,000 a year. Ercan, originally an assembly plant, now produces engines with more than 70 percent local content. Hemas makes transmissions and differentials under license from Eaton. It has made substantial investments for gearbox production, and had a virtual monopoly of the market until three years ago. Also highly successful in the export field, in 1983-84 it sold more than \$25 million worth of tractor gears to Ford of Europe despite stiff competition.

The Turkish auto industry is not short of initiative, with the right support — and technology — it could meet export opportunities, not only as a component supplier, but as a vehicle producer, particularly for the nearby Arab markets. As a potential member of the EEC it also offers the major industrialized European car makers a massive new market — potentially the biggest in Europe.

— Anne Hope

The Murat Dogan by Turkish Fiat.

During the early days of the auto industry, Turkey took the unusual step of going into the glass fiber business as a result of a pioneering joint venture with a small British specialist auto manufacturer, Reliant. The lightweight four-door car styled by Ogle was designed specifically for the Turkish

market. Reliant planned the factory and production assembly down to the last nut and bolt and it was said at the time that Turkey got a complete packaged "motor industry for the price of a single Boeing 707 aircraft."

The experience Turkish auto makers acquired from the Reliant venture enabled them to develop further skills in glass fiber body production, and Otosan went on to make cabs for commercial vehicles.

Because of underutilization of capacity, the truck and tractor sectors are now in considerable difficulty. In 1985, minibus production was only 70 percent of capacity while that of tractors fell to 29 percent, and a major rationalization of the agricultural machinery sector

is on the cards. Fiat, Renault and Ford all make tractors no longer produced in their own countries.

Meanwhile, the component side of the auto industry has been growing rapidly with more than 1,000 different companies involved making replacement spares and original equipment. In the late 1970s Tumosan was set up to make diesel engines under license from Daimler-Benz, Fiat, Volvo and Mitsubishi. Since 1982, Ercan has been making truck engines for Man at the rate of about 8,000 a year. Ercan, originally an assembly plant, now produces engines with more than 70 percent local content. Hemas makes transmissions and differentials under license from Eaton. It has made substantial investments for gearbox production, and had a virtual monopoly of the market until three years ago. Also highly successful in the export field, in 1983-84 it sold more than \$25 million worth of tractor gears to Ford of Europe despite stiff competition.

The Turkish auto industry is not short of initiative, with the right support — and technology — it could meet export opportunities, not only as a component supplier, but as a vehicle producer, particularly for the nearby Arab markets. As a potential member of the EEC it also offers the major industrialized European car makers a massive new market — potentially the biggest in Europe.

— Anne Hope

Ebank Sets Sights on Trade Financing Market

WHEN the great blizzard came in March, all government offices and banks shut down for several days. But this did not deter some bank executives, who struggled to their darkened, cold offices, to try to keep the wheels going.

Mr. Adil Üsküdarlı, Ebank's deputy general manager, was one executive who braved both the cold and the vagaries of the telephone system to try and arrange a \$1.2 million letter of credit with a Swiss bank as part of a Turkish trade finance deal. "Fifty percent of our credits now go towards international trade financing," says Mr. Üsküdarlı, who was formerly with the Ottoman Bank and the Turkish Foreign Trade Bank. "Since 1980 and the new emphasis on exports, everyone is now trying to get on the foreign trade business bandwagon."

Last year Ebank's assets almost doubled to TL 85.8

foreign trade financing it expanded into Istanbul, where it now has five branches. "We have changed from being purely a domestic bank," explains Mr. Üsküdarlı. He feels that because 15 percent of all foreign exchange inflows must be "sold" to the Central Bank at predetermined rates, which can be changed with little or no warning, the commercial banks have little room for maneuver, or for making additional profits.

He says the banks should carry the foreign exchange risk, although the Central Bank insists that commercial banks should not keep an open position of more than 10 percent on the foreign exchange markets.

Mr. Üsküdarlı believes in teamwork and effort as the formula for success. "If we can keep up our present consistency, especially as far as management is concerned, I think we will really be going places in the future," he says.

How and with whom can you do business in Turkey?

The Istanbul Chamber of Commerce has set up a unit to provide the information you require, free of charge.

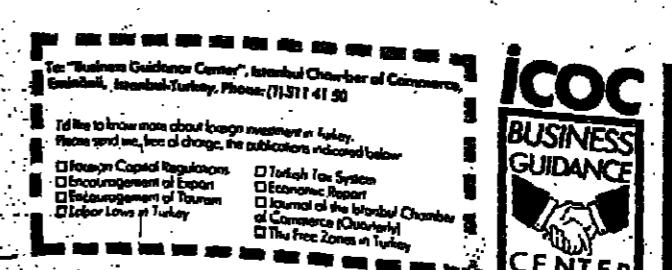
If you contact us personally, you could consult our experts, who will be only too pleased to advise you on any issue related to your business. We may use our computerized "Data Bank" for more information. Furthermore, we can put you in touch with any member of the business community in Turkey.

If you simply call us, our experts in "Business Guidance Center" will be willing to give concise, clear answers to your specific questions about Turkish economy.

If you wish to receive our publications, in English, on issues of special interest to foreign investors, just send the coupon below to our "Business Guidance Center".

The fact that the Istanbul Chamber of Commerce is a 105-year-old, non-profit public organization, makes all this possible. It has over 30,000 members from every trade and industry, that is over 50% of the total trade volume of Turkey.

Contact with the Istanbul Chamber of Commerce means getting in touch with us.



TÜRKİYE HALK BANKASI

Partner for Success in Turkey: Türkiye Halk Bankası
"Popular Bank of Turkey"

Türkiye Halk Bankası is one of the top 5

Turkish Banks and can be your partner for success in Turkey.

Using your business concept as a primary resource, we can add our full banking services, experienced staff, representative offices, more than 400 correspondents and our well-running partnership. We have done it before. If you are planning to contact with Turkey. Come to the T. Halk Bankası. Together we can do it again.

HEAD OFFICE
1. Mez. Solak Sıhhiye - ANKARA
Tel: 320 1520-210 110 (16 lines)
FOREIGN RELATIONS
DEPARTMENT
63. Alaturk Bulvarı Yenicehöyük -
ANKARA
Tel: (41) 33 10 22
LEFKOŞA BRANCH
P.O. Box 256
Levkosia, Northern Cyprus
Tel: 57 241 Kmt. 11 Tel: 520 76155
Representative Office in GERMANY
5000 Köln 1, Hohenzollernstrasse 12
Germany
Tel: 888 024 Halk d Tel: 0221/238521

Representative office in HOLLAND
N. 2. Voorburgwal 169 1012 dk
Amsterdam HOLLAND
Tel: 13210 160 n Tel: 020/278787

Liaison Office
4. 8000 München 2 Goethe Str. 3 Stock 2
Germany
Tel: 523220 Hahn d Tel: 089/555392
■ 1000 Berlin 30 Postdamer Str. 117-119
Germany
Tel: 13003 Hahn d Tel: 030/2624774
■ 7000 Stuttgart 1 Rotenbaurplatz 2/4 OG
Germany
Tel: 722469 hahn d Tel: 0711/282163
■ 2000 Hamburg 1 Stendamm 60
Germany
Tel: 2174171 hahn d Tel: 040/247908

Representative office in GREECE
1. Mez. Solak Sıhhiye - ANKARA
Tel: 320 1520-210 110 (16 lines)
FOREIGN RELATIONS
DEPARTMENT
63. Alaturk Bulvarı Yenicehöyük -
ANKARA
Tel: (41) 33 10 22
LEFKOŞA BRANCH
P.O. Box 256
Levkosia, Northern Cyprus
Tel: 57 241 Kmt. 11 Tel: 520 76155
Representative Office in GERMANY
5000 Köln 1, Hohenzollernstrasse 12
Germany
Tel: 888 024 Halk d Tel: 0221/238521

From Historical Sites to Idyllic Coves

LONG one of the walls of Istanbul's Topkapi Palace is a row of clapboard houses with red roof tiles newly restored and painted in light pastel shades of green, gray and ochre. For as little as \$35 per night, a visitor can now share the "Ottoman" experience by staying in this new tourist venture. However, trying to live like a sultan may cost a little more, as luxury hotels are not cheap in Istanbul. But good food is inexpensive, and like so many of the good things in Turkey, the warmth of the people cannot be measured in terms of cost. A visit to Istanbul provides a host of unforgettable experiences: the sun rising above the mist hanging low over the Bosphorus, the domes and minarets in the evening skyline and the summoning of the faithful to prayer.

Topkapi Palace, with its famous jeweled dagger, made even more famous by Hollywood, is only one of Istanbul's many attractions: the Blue Mosque, Aya Sofia, the great covered bazaar, the extraordinarily opulent — almost decadent — Dolmabahce Palace with its spectacular waterfront on the Bosphorus. At Dolmabahce Palace, time has stood still since the clocks were stopped at 9:05 a.m. on the death of Kemal Ataturk, the father of modern Turkey, in 1938.

The city is unique — it is the only one which straddles two continents, Europe and Asia. The European side, built on the Golden Horn, is hemmed in by dramatic crumbling walls and watchtowers which are also being restored. Cross the bridge over the dividing Bosphorus and Asia spreads away to the east.

Turkey's geographical location has made it one of the world's greatest open-air museums. Claiming one of



Spectacular vistas like that in Kemer draw more and more tourists.

the earliest human settlements, dating back to 7500 B.C., it has been at the crossroads of history as successive civilizations have swept back and forth across its varied landscapes.

These range from the central Anatolian plateau and the harsher desert lands to the east and the craggy but softer Mediterranean coast.

In eastern Anatolia money is attempting to change the face of nature by taming the waters of the Euphrates and the Tigris with huge dams that bring the earth back to life. There are the lunar-like landscapes of Cappadocia and the petrified waters of Pamukkale. Towards the Black Sea are lush valleys and clear flowing streams.

But it is the southern coast, with its spectacular cliffs, sheltered coves and a wealth of antiquities, that is now drawing tourists, by land and sea. Centuries ago, the Greeks, Romans, Hittites and others from both east and west were also drawn here. The temples, theatres and fortified cities they built lie strewn amid rock and scrub. At the western end are the classical sites of Troy, Ephesus and Pergamum. At Asos, on the tip of the Çanakkale peninsula between Troy and Edremit, great fallen columns and pillars, like sliced salamis, bear witness to great earthquakes of the past such as the one in 544 A.D. that shook Con-

stantinople (now Istanbul) for 40 days.

Scattered like giant broken dolls are the stone heads and limbs of great stone figures, carved more than 2,000 years ago, which once guarded the top of Mount Nemrut and the tomb of King Antiochus. These ruined figures, originally standing in two terraces below what may have been a man-made top to the gleaming white mountain, are strangely reminiscent of the toppled statue heads on Easter Island in the Pacific. Turkey is full of such surprises from the past.

Many of the sites and deserted beaches along the southern coast are accessible only by boat, as surfaced roads and tracks are rare.

Here, most of the area of southern Anatolia between Bodrum and Antalya, including Marmaris, are as yet relatively unknown to most tourists, except those from Britain and West Germany. It is in this region that major efforts are being concentrated to develop more facilities for tourists. Existing hotels and marinas are being expanded and new ones constructed to cope with the influx of visitors. Yacht chartering is proving especially popular with West Germans and Britons, who are currently trail-blazing a coastline offering some of the best cruising anywhere in the Mediterranean.



The ruins of Ephesus, left, and Adiyaman, above, testify to Turkey's rich and ancient heritage.



The Aspendos Theater in Antalya, part of an area along the southern coast that is still relatively unknown to tourists.

For those with less time, a cruise around the Golden Horn or along the Bosphorus from Istanbul should not be missed. Along the waterside are the palaces and former houses of rich Turkish merchants, many restored and in use as private homes. Also recommended is a trip to the Prince Islands, a group of nine pine-wooded islands with sandy beaches, an hour's sailing from Eminonu, one of Istanbul's many ferryboat terminals.

Traveling around the country by air, train or bus is inexpensive. An eight-hour train journey in first class may cost as little as \$10, and a bus even less. Car hire is expensive in the cities. Hotels outside Ankara, the capi-

tal, and Istanbul are among the cheapest in Europe, and though usually simple, are clean and hospitable. There is a major shortage of first class tourist hotels at present.

Eating out, which is cheaper than anywhere else in the Mediterranean region, and Turkish warmth and hospitality, always make the experience enjoyable. Language is never a problem, for the waiter will lead you to the kitchen and let you point and choose from whatever is simmering away in the cauldrons — often delicious soups and stews. And, of course, there are always *kebabs*, which have crossed all language barriers.

— Lee V. Wiley

Revolutionizing Istanbul's Cultural Life

IT is no exaggeration to say that the Istanbul Foundation for Culture and Arts, the brainchild of Dr. Nejat Eczacibasi, one of Turkey's leading industrialists, has revolutionized the cultural life of Turkey's largest city. In the 15 years since the first International Istanbul Festival was organized, the rich summer program of music, dance and drama has become an institution.

"Our main problem now is the limited space for attendance," Dr. Eczacibasi said. "Istanbul needs a concert hall very badly." Concerts are now held in the Byzantine church of St. Irene, the Ataturk Cultural Center's Opera House; for large events, there is the inadequate Sports and Exhibition Palace.

To remedy this situation, Dr. Eczacibasi is organizing a project to build a 3,500-seat concert hall on the outskirts of the city. A Turkish architect who teaches in Paris has designed the structure, but "the formalities are not yet finished," Dr. Eczacibasi explains, adding that the cost of the project will require cooperation between private and public sources.

The Festival itself, even with less than perfect facilities, has grown considerably in breadth and stature since 1973. Of the more than 2,000 festivals held worldwide, Istanbul's is one of a select group of just 44 recognized by the European Association of Music Festivals. This year the program will be stretched to six weeks, instead of being squeezed into three. "Last year we were exhausted running from concert to concert," Dr. Eczacibasi says. "This year it will be more relaxed."

Some of the highlights this summer will be performances by the Berlin S

phony Orchestra, the Moscow State Symphony and the Krakow Philharmonic Orchestra and Chorus. The Musica Antiqua Köln, the English Chamber Orchestra and the Festival Strings Lucerne will perform in the intimate St. Irene's Flautist Jean-Pierre Rampal and 21 other artists will also give recitals in the church. Mozart's opera "Abduction from the Seraglio" will be performed in the courtyard of Topkapi Palace.

Pop and jazz concerts are usually among the best attended events of the season. This year's hot tickets will undoubtedly include Chick Corea and Gary Burton, performing together; Ray Charles; Herbie Hancock; Al di Meola; and Ralph Towner.

"The locality is the reason for the Istanbul Festival," says Dr. Eczacibasi. The use of unique historic sites like St. Irene's and the Rumeli Fortress on the banks of the Bosphorus give the festival its special flavor.

This year the Foundation is branching out to the Izmir area, utilizing such sites as the theater in Ephesus, one of the best preserved antique theaters in the world, and the fortress in Cesme.

Like so many other festivals, the one in Istanbul runs at a deficit. It enjoys government support in being given free use of the sites. The costs are born primarily by private contributions in the form of corporate sponsorship of individual events. Ticket sales (prices range from \$2-\$18) and advertising space in the Festival Program make up the difference.

The huge success of the Festival prompted Dr. Eczacibasi and the Foundation to sponsor yet another event —

the International Filmdays, a two-week film festival showing about 130 films, now in its third year. Held in April, it gives film-starved Istanbulites a chance to see a wide variety of critically acclaimed movies from all over the world.

The enthusiastic response to the festival is slowly revitalizing the city's commercial cinemas, nearly moribund under the impact of television, home videos, and the lawlessness and foreign exchange shortage that crippled society here in the late 1970s.

The next venture of the Foundation will be the Istanbul Biennale, scheduled for September 15-November 15. Concentrating on the visual arts, it will be "very international in character," according to Dr. Eczacibasi. Well-known artists from around the world will come to Istanbul to show their work and paint in historic locations.

"This will complete Istanbul's cultural calendar," Dr. Eczacibasi said. "Cinema in the spring, music in the summer and visual arts in the fall."

"I suppose I had always hoped to do something in the field of music," he admitted. "It was in me." During his university years in Berlin, before World War II, Dr. Eczacibasi studied violin at the Conservatory, but in the post-war years, as he was working from 12 to 14 hours a day to establish his pharmaceutical company, he rarely found time to open his violin case.

Now, his pharmaceutical company, bearing the Eczacibasi name, is Turkey's leading health-based industrial group, and the festivals Dr. Eczacibasi helped establish hold a place of pride in Istanbul's cultural life.



From the collection of Spink & Son Ltd.

EXCELLENCE IS UNMISTAKABLE

In banking, as in every other sphere, excellence is unmistakable.

At TEB, this is reflected in:

- The totally professional service offered to prime correspondent banks and select clients.
- In our broad knowledge and experience of Turkey's industrial and commercial sectors.
- In our progressive and innovative approach.
- And in our unwavering loyalty to traditional banking values.



TÜRK EKONOMİ BANKASI A.Ş.

General Management and International Division:
Istiklal Caddesi 284 Odakule Kat 13 Beyoğlu-İstanbul
Telephone: (1) 1512121. Cable: TEBGENEL-İstanbul
Telex: 25358 TEBU TR. Fax: 1496568.

TECHNOLOGY

Computing Fluid Flows Is Easier One Cell at a Time

By JAMES GLEICK
New York Times Service

NEW YORK — Of all the hard problems occupying the world's supercomputers, one heads the list: calculating the flow of fluids. The equations that engineers use to study how air flows past the wing of an aircraft, or water around a ship's hull are notoriously hard to solve, straining even the most powerful computers.

Yet these kinds of calculations pop up again and again, not only in designing planes, ships, rockets and automobiles but in flow problems of them all. For the last few decades, computer scientists have tried to extend their grasp of such problems by designing ever more powerful computers. But even that approach is inadequate.

What is needed, some physicists have come to believe, is a radically new approach to mathematical modeling, the method by which computers are used to simulate and predict the phenomena of the world.

Guided by this vision, a strange new wing of theoretical physics has yielded a way to completely sidestep the calculations that computers find so fiendish. Instead of using complex equations to mirror fluid flow, physicists are creating fantastically simple mathematical models known as cellular automata. A cellular automaton is a large array of cells, like the squares of a checkerboard or the hexagons of a honeycomb, that can be projected onto a computer screen.

On this lattice, dots hop from cell to cell, colliding and recoiling according to rules programmed into the computer.

Dots hop from cell to cell, colliding and recoiling according to rules programmed into the computer.

These models, which are called automata because they run according to their own rules of motion, provide physicists with a miniature simulation of the universe. In the real world, space and time are continuous, or so physicists assume. In the simplified world of cellular automata, space is represented by the grid of cells, in the real world, molecules can move freely in infinitely many directions, at infinitely many speeds. In cellular automata, the dots are allowed to occupy only the cells of the lattice and can travel at only one speed.

These models, which are called automata because they run according to their own rules of motion, provide physicists with a miniature simulation of the universe. In the real world, space and time are continuous, or so physicists assume. In the simplified world of cellular automata, space is represented by the grid of cells, in the real world, molecules can move freely in infinitely many directions, at infinitely many speeds. In cellular automata, the dots are allowed to occupy only the cells of the lattice and can travel at only one speed.

Y IMPOSING so many constraints, these models seem at first to sacrifice the richness of the real world. But they gain in return an astonishing improvement in the speed of calculation. And to the surprise of some physicists, they seem to work.

"We're realizing that we don't need all these details that we've been worrying about all these years," said Brod Hasslacher, a physicist at Los Alamos National Laboratory. "The reason people are super-excited is that these skeletal microworlds, which completely eliminate the details of real fluids, capture everything. I think we've just begun to see the power of it."

Researchers say that the new models are especially useful for calculating flows around complicated shapes, like the rear-view mirrors on the sides of a car. In a standard supercomputer, such shapes require many numbers to describe, making the calculations extremely complex. In cellular automata, shapes can simply be drawn onto the grid with a computer graphics terminal.

Because the same simple calculations are repeated millions of times, cellular automata are especially well suited to a new breed of computers that perform parallel processing. Even the powerful Cray supercomputers are serial machines: they break a problem into thousands of pieces that must be funneled one at a time through a central processor. Parallel machines avoid this bottleneck by using many processors to solve pieces of a problem simultaneously.

France, Italy Join On Chips

Thomson, STET Plan Dutch Firm

By Axel Krause
International Herald Tribune

PARIS — Thomson-CSF of France and SGS Microelectronics SpA of Italy announced plans Wednesday to create Western Europe's second-biggest semiconductor company by combining key operations in a venture based in Amsterdam.

The French and Italian governments, which control the two ailing companies, approved the merger of microchip activities after five months of negotiations. Military-related activities in the semiconductor field were excluded from the venture for national security reasons, executives said.

SGS is a subsidiary of Italy's state-owned Società Finanziaria Telefonica, or STET.

Thomson SA of France, which focuses on consumer goods, engineering and industrial products, owns 55 percent of the avionics and electronics unit Thomson CSF, with the remainder of the shares publicly held.

Alain Gomez, chairman of Thomson SA, said, "We consolidated not attributable profit more than doubled last year, to a record 2.18 billion francs (\$364 million) from 960 million francs in 1985."

Industry analysts and at least one competitor praised the merger, the first of its kind in the West European semiconductor industry.

They emphasized that it would bolster Western Europe's efforts to compete more effectively against American and Japanese companies.

The main goals, French and Italian company executives said, are to restore profitability to the units and to establish a "world-class semiconductor company" by 1990 with annual sales of over \$1 billion. Western Europe's largest semiconductor maker is Philips NV of the Netherlands.

"The merger provides us with the critical mass needed to compete successfully in a increasingly fierce international environment," Mr. Gomez said. "And the means we chose allowed us to move swiftly with little cost, and involved few risks."

Although many details remain to be settled, including the new company's name, Mr. Gomez said in Paris that Thomson and STET would each own 50 percent of the new venture.

Company sources said that Olivetti SpA of Italy had been seeking a minority share in the venture but was rejected by Thomson.

Mr. Gomez said that layoffs were anticipated at the two semiconductor units, which have a combined work force of 19,000. He declined to predict when the new company would begin generating profits.

Thomson-CSF controls about 1.7 percent of the world semiconductor market, amounting to \$436 million in yearly sales. Half of its revenue is generated by custom-made and standard metal oxide, or semiconductors for the electronic industry, which are used in cars, telephones, television sets.

Its semiconductor unit posted an estimated \$33 million loss last year, industry sources said.

SGS, with 1.5 percent of the world market, generated half of its \$375 million in yearly sales last year through sales of bipolar semiconductor products, which have industrial applications including refineries, aluminum plants and locomotives.

For that reason, the figure that

will most interest analysts on Thursday will be VW's operating earnings, which exclude such one-time gains.

"VW's operating earnings will be lower than they were in 1985 and they will also be lower this year," said Hans-Joachim Pilz, an analyst for Bank in Liechtenstein GmbH in Frankfurt.

Analysts will also be watching to see how VW will act to restore credibility and investor confidence, which have been damaged by tales of questionable management and infighting among executives.

On March 11, VW disclosed that it had lost up to 430 million DM through forward dollar contracts, which are designed to hedge against exchange-rate losses but which were forged. VW also alleged that entire computer data bases were erased and programs altered to facilitate the fraud.

VW said then that reserves would have to be set aside to cover the possible losses, but that 1986 earnings would match 1985's.

In 1985, VW posted a group profit of \$95.6 million DM, more than double the 288 million DM in 1984. Sales rose 15 percent, to \$2.5 billion DM.

However, West German companies can legally manipulate their net profit figures by a variety of balance sheet manipulations. For example, hidden reserves can be tapped to maintain profits and dividends at specific levels.

The Bonn government had planned to sell its VW shares in 1987, as the centerpiece of its denationalization policy. Analysts agree that the sale is out of the question for now.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

But the currency scandal and the resulting management shake-up will cast a long shadow over VW's annual meeting Thursday. An investigation by West German prosecutors into the fraud is continuing.

As part of the shake-up, West German dealers, VW's chief foreign exchange dealer, was fired and later arrested on suspicion of fraud. Six other financial officials were independently suspended.

Rolf Seloway, former VW financial director, also lost his job, though company officials say he is not suspected of criminal actions.

Carl H. Hahn, VW's managing board chairman, had openly defended Mr. Seloway prior to the scandal over the company's methods of financial control. In 1986, Mr. Seloway rallied allies on the board to defeat a proposal backed by Mr. Hahn to install a controller.

Banking sources said that kind of behind-the-scenes political wrangling is not new to VW and may be the root of its troubles.

Wednesday's NYSE Closing

Tables include the nationwide prices up to the closing on Wall Street and do not reflect late trades elsewhere.

12 Month High Low Stock Div. Yld. Stk. Stk. Close
High Low Stock Div. Yld. Stk. Stk. Close
12 Month High Low Stock Div. Yld. Stk. Stk. Close
(Continued)

	Symbol	12 Month High	12 Month Low	Stock	Div.	Yld.	Stk.	Stk.	Close
375	Palms	52	42	1215	33%	32	32	32	32
376	Palms	52	42	1215	33%	32	32	32	32
377	Palms	52	42	1215	33%	32	32	32	32
378	Palms	52	42	1215	33%	32	32	32	32
379	Palms	52	42	1215	33%	32	32	32	32
380	Palms	52	42	1215	33%	32	32	32	32
381	Palms	52	42	1215	33%	32	32	32	32
382	Palms	52	42	1215	33%	32	32	32	32
383	Palms	52	42	1215	33%	32	32	32	32
384	Palms	52	42	1215	33%	32	32	32	32
385	Palms	52	42	1215	33%	32	32	32	32
386	Palms	52	42	1215	33%	32	32	32	32
387	Palms	52	42	1215	33%	32	32	32	32
388	Palms	52	42	1215	33%	32	32	32	32
389	Palms	52	42	1215	33%	32	32	32	32
390	Palms	52	42	1215	33%	32	32	32	32
391	Palms	52	42	1215	33%	32	32	32	32
392	Palms	52	42	1215	33%	32	32	32	32
393	Palms	52	42	1215	33%	32	32	32	32
394	Palms	52	42	1215	33%	32	32	32	32
395	Palms	52	42	1215	33%	32	32	32	32
396	Palms	52	42	1215	33%	32	32	32	32
397	Palms	52	42	1215	33%	32	32	32	32
398	Palms	52	42	1215	33%	32	32	32	32
399	Palms	52	42	1215	33%	32	32	32	32
400	Palms	52	42	1215	33%	32	32	32	32
401	Palms	52	42	1215	33%	32	32	32	32
402	Palms	52	42	1215	33%	32	32	32	32
403	Palms	52	42	1215	33%	32	32	32	32
404	Palms	52	42	1215	33%	32	32	32	32
405	Palms	52	42	1215	33%	32	32	32	32
406	Palms	52	42	1215	33%	32	32	32	32
407	Palms	52	42	1215	33%	32	32	32	32
408	Palms	52	42	1215	33%	32	32	32	32
409	Palms	52	42	1215	33%	32	32	32	32
410	Palms	52	42	1215	33%	32	32	32	32
411	Palms	52	42	1215	33%	32	32	32	32
412	Palms	52	42	1215	33%	32	32	32	32
413	Palms	52	42	1215	33%	32	32	32	32
414	Palms	52	42	1215	33%	32	32	32	32
415	Palms	52	42	1215	33%	32	32	32	32
416	Palms	52	42	1215	33%	32	32	32	32
417	Palms	52	42	1215	33%	32	32	32	32
418	Palms	52	42	1215	33%	32	32	32	32
419	Palms	52	42	1215	33%	32	32	32	32
420	Palms	52	42	1215	33%	32	32	32	32
421	Palms	52	42	1215	33%	32	32	32	32
422	Palms	52	42	1215	33%	32	32	32	32
423	Palms	52	42	1215	33%	32	32	32	32
424	Palms	52	42	1215	33%	32	32	32	32
425	Palms	52	42	1215	33%	32	32	32	32
426	Palms	52	42	1215	33%	32	32	32	32
427	Palms	52	42	1215	33%	32	32	32	32
428	Palms	52	42	1215	33%	32	32	32	32
429	Palms	52	42	1215	33%	32	32	32	32
430	Palms	52	42	1215	33%	32	32	32	32
431	Palms	52	42	1215	33%	32	32	32	32
432	Palms	52	42	1215	33%	32	32	32	32
433	Palms	52	42	1215	33%	32	32	32	32
434	Palms	52	42	1215	33%	32	32	32	32
435	Palms	52	42	1215	33%	32	32	32	32
436	Palms	52	42	1215	33%	32	32	32	32
437	Palms	52	42	1215	33%	32	32	32	32
438	Palms	52	42	1215	33%	32	32	32	32
439	Palms	52	42	1215	33%	32	32	32	32
440	Palms	52	42	1215	33%	32	32	32	32
441	Palms	52	42	1215	33%	32	32	32	32
442	Palms	52	42	1215	33%	32	32	32	32
443	Palms	52	42	1215	33%	32	32	32	32
444	Palms	52	42	1215	33%	32	32	32	32
445	Palms	52	42	1215	33%	32	32	32	32
446	Palms	52	42	1215	33%	32	32	32	32
447	Palms	52	42	1215	33%	32	32	32	32
448	Palms	52	42	1215	33%	32	32	32	32
449	Palms	52	42	1215	33%	32	32	32	32
450	Palms	52	42	1215	33%	32	32	32	32
451	Palms	52	42	1215	33%	32	32	32	32
452	Palms	52	42	1215	33%	32	32	32	32
453	Palms	52	42	1215	33%	32	32	32	32
454	Palms	52	42	1215	33%	32	32	32	32
455	Palms	52	42	1215	33%	32	32	32	32
456	Palms	52	42	1215	33%	32	32	32	32
457	Palms	52	42	1215	33%	32	32	32	32
458	Palms	52	42	1215	33%	32	32	32	32
459	Palms	52	42	1215	33%	32	32	32	32
460	Palms	52	42	1215	33%	32	32	32	32
461	Palms	52	42	1215	33%	32	32	32	32
462	Palms	52	42	1215	33%	32	32	32	32
463	Palms	52	42	1215	33%	32	32	32	32
464	Palms	52	42	1215	33%	32	32	32	32
465	Palms	52	42	1215	33%	32	32	32	32
466	Palms	52	42	1215	33%	32	32	32	32
467	Palms	52	42	1215	33%	32	32		

Philips Plans Share Issue, Reports 42% Rise in Net

Reuters

AMSTERDAM — The Dutch electronics giant, NV Philips, said yesterday that it planned to issue 5 million common shares to strengthen its global presence.

The offering, Philips's largest international issue, will be launched on the New York Stock Exchange and the 17 European bourses where Philips is listed.

A board member, Jan Zantman, said the issue was expected to raise 1 billion guilders (\$494 million), based on a price of 50 guilders a share.

Earlier, Philips reported that first-quarter net profit rose 42 percent, to 205 million guilders, from

the like 1986 period. Sales fell 9 percent to 11.85 billion guilders.

Mr. Zantman said the company's positive position and a favorable investment climate prompted the new share issue. The move is aimed at extending ownership of Philips shares and is part of a drive to strengthen the company's worldwide presence.

Earlier this month, Philips's chairman, Cor van der Klink, inaugurated trading of the company's shares on the New York Stock Exchange. Philips's U.S. shares had been traded over the counter.

"We want shareholders to benefit from our improved profits," Mr. Zantman said.

Philips shares slipped on the Amsterdam Stock Exchange after the news to 49 guilders, from 49.70 guilders on Tuesday.

The company said the new issue would dilute its share capital by nearly 9 percent, bringing the shares outstanding to 252 million.

Philips said it was still seeking listings in Milan and Tokyo.

The latter would be a significant step in Philips's aim to strengthen its foothold in Japan.

Philips has no intention of buying out the remaining 42 percent of the shares in North American Philips Corp. that it does not own. These shares are also listed on the New York Stock Exchange, alongside those of the parent company.

Regarding the first-quarter performance, company officials said operating profit improved worldwide, notably in North America, but export earnings slipped because of the strong guilder.

Sales rose in nearly all product divisions and geographical areas and the company saw continuing high growth in consumer electronics in the United States.

Mr. Zantman said that Philips's U.S. microchip producer, Signetics, had a smaller deficit than a year earlier because of a gradual recovery of the U.S. semiconductor industry. He said he expected Signetics to be profitable in the second quarter.

Ford Profit Soars 105% in Quarter

United Press International

DETROIT — Ford Motor Co. announced record earnings on Wednesday for the first quarter of 1987, with net income leaping 105 percent, beating the combined profits of General Motors Corp. and Chrysler Corp.

Ford, the second-ranked U.S. automaker, said its profit of \$1.49 billion, or \$5.73 a share, for its worldwide operations is the highest quarterly profit its 84-year history.

Sales rose 23 percent to \$18.14 billion.

Ford's U.S. operations earned \$1.16 billion, up 94 percent. Non-U.S. sales totaled \$330 million, up 150 percent. The improvements reflected stronger operations in Europe as well as increased market share and efficiencies, the automaker said.

Factory sales of cars, trucks and tractors rose to 1.63 million units from nearly 1.49 million units in the first quarter of 1986. Ford's share of the U.S. auto market rose 2 percentage points to 20 percent compared with the 1986 period.

"The record first-quarter earnings reflect strong performance in the market and continued improvements in Ford's ongoing level of profitability," Ford said.

Olivetti in Talks On Equity Sale to Japanese Investors

Special to the Herald Tribune

ROME — Olivetti SpA, Europe's biggest office equipment and personal computer group, said it has been holding talks with a Japanese investment bank to sell an equity stake in the company to Japanese interests.

Carlo De Benedetti, Olivetti's chairman, said Tuesday that he held talks on a possible sale with Nomura Securities Co. during a trip to Japan early this week.

The chance that Japanese capital may buy into Olivetti is quite good, "he said, but declined to indicate how big a stake might be involved, or which Japanese companies Nomura could be representing. A final announcement is expected before the annual shareholders meeting on June 23.

American Telephone & Telegraph Co. already owns 23.5 percent of Olivetti, with an option for a further 15 percent in 1990. Volkswagen AG holds a 5 percent share.

Olivetti has already established some links with Japanese companies. Its Japanese operating company is 20 percent owned by Toshiba Corp., and in Europe the company produces and markets office copiers in cooperation with Canon Inc.

Deutsche Bank to Get Tax Reimbursement

Reuters

BONN — Deutsche Bank AG is to receive 2 billion Deutsche marks (\$1.12 billion) from federal and state governments because it paid too much tax in connection with the public sale of the Flick industrial group, news reports said Wednesday.

A spokesman for the West German Finance Ministry confirmed that a repayment would be made, but declined to specify the amount. The Bonn newspaper General-Anzeiger attributed the 2 billion DM figure to Westfälische Rundschau, a newspaper in Dortmund.

AMSTERDAM-ROTTERDAM
BANK N.V.
Amsterdam
(The Netherlands)

Warrants attached to
4,155,187 shares issued per
May 12, 1986

Due to the decision to issue to holders of ordinary shares in the above mentioned company a bonus of Dfl. 0.50 in ordinary shares from the Shares Premium Reserve with simultaneous addition to any reserve of a corresponding amount out of that portion of the profit over 1986 which is intended for distribution, the warrant exercise price will be reduced from Dfl. 114.50 to

Dfl. 113.50

as from April 17, 1987.

The Trustee:
AMSTERDAMSCH
TRUSTEE'S KANTOOR
B.V.

April 16, 1987
N.Z. Voorburgwal 326-328,
Amsterdam
(The Netherlands)

"Improvements in product quality, manufacturing technology and productivity are providing greater satisfaction for our customers, better return for our stockholders and higher profits sharing for most of our U.S. employees," it said.

Ford's finance subsidiary, Ford Motor Credit Co., reported a 44 percent increase in profit to \$196 million, while its First Nationwide Financial banking unit earned \$26 million, an 18 percent gain.

One industry analyst, Thomas F. O'Grady of Integrated Automotive Resources Inc. in suburban Philadelphias, called Ford's earnings "fabulous."

"Given the combination of the industry's slower sales and the cost-savings incentive programs which were going against them, the results are phenomenal," Mr. O'Grady said.

Ford is the only one of the Big Three U.S. automakers to report a year-to-year increase in first-quarter profits, with industry analysts and the other makers attributing the decline to costly buyer incentive programs and plant investments.

Last week GM, the giant of the auto industry, reported a 23 percent decline in first quarter profit to \$92.2 million, or \$2.62 a share.

GM's sales declined 3 percent, to \$26.1 billion.

On Monday, Chrysler said its first quarter profit fell 24 percent as buyer incentives and plant improvements ate into profit.

The No. 3 automaker's earnings were \$269.7 million, or \$1.24 a share. The per-share figure was adjusted for a 3-for-2 stock split announced in March.

Chrysler sales totaled \$6 billion, up 3 percent.

Texaco's Profit Plunged by 64% In First Quarter

Reuters

WHITE PLAINS, New York — Texaco Inc. said Wednesday that first-quarter profit fell 64 percent, to \$118 million, from \$328 million in the like 1986 period. It cited declining profit margins in oil refining and marketing and the costs of its legal dispute with Pennzoil Co.

That dispute forced Texaco to seek protection on April 12 from its creditors under Chapter 11 of the Federal Bankruptcy Code.

Texaco's per-share earnings fell to 49 cents from \$1.37 a year earlier, with revenues down 11 percent to \$8.5 billion from \$9.6 billion.

Texaco said its situation in the first quarter, when oil prices were rising, reversed that of the year-ago period. Then, the company benefited because it did not immediately pass on declining crude oil prices to retail customers.

Texaco's Profit Plunged by 64% In First Quarter

Reuters

WHITE PLAINS, New York — Texaco Inc. said Wednesday that first-quarter profit fell 64 percent, to \$118 million, from \$328 million in the like 1986 period. It cited declining profit margins in oil refining and marketing and the costs of its legal dispute with Pennzoil Co.

That dispute forced Texaco to seek protection on April 12 from its creditors under Chapter 11 of the Federal Bankruptcy Code.

Texaco's per-share earnings fell to 49 cents from \$1.37 a year earlier, with revenues down 11 percent to \$8.5 billion from \$9.6 billion.

Texaco said its situation in the first quarter, when oil prices were rising, reversed that of the year-ago period. Then, the company benefited because it did not immediately pass on declining crude oil prices to retail customers.

هذا هو المحتوى

Sal. Oppenheim jr. & Cie.

Bankers since 1789



Summary of our Annual Report 1986

	1985	1986
Business Volume	DM 5,930 million	DM 5,521 million
Total Assets	DM 2,870 million	DM 2,194 million
Deposits	DM 150 million	DM 160 million
Bill and Advances	DM 11,881 million	DM 12,287 million
Capital		
Consolidated Total Assets		

The Partners

Cologne/Frankfurt, April 1987

Zurich
Bank Oppenheim Pierson
(Schweiz) AGNew York
Haus Tel. Oppenheim
Inc.Luxembourg
Bank Oppenheim Pierson
International S.A.

Restoration of normal profitable trading in all sectors of the diamond industry

Extracts from Julian Ogilvie Thompson's Statement for 1986

1. Rapports du Conseil d'Administration et du Commissaire aux Comptes.
2. Approbation du bilan et du compte de pertes et profits au 31 décembre 1986 affectation des résultats;
3. Décharge aux administrateurs et au commissaire;
4. Nominations statutaires.

Aucun quorum n'est requis pour les points à l'ordre du jour de l'assemblée générale annuelle et les décisions seront prises à la majorité des actions présentes ou représentées à l'assemblée avec la restriction qu'un actionnaire ne peut, ni pour lui-même, ni comme mandataire, prendre part au vote pour un nombre d'actions dépassant la cinquième partie des actions en circulation ou les deux cinquièmes des actions présentes ou représentées à l'assemblée.

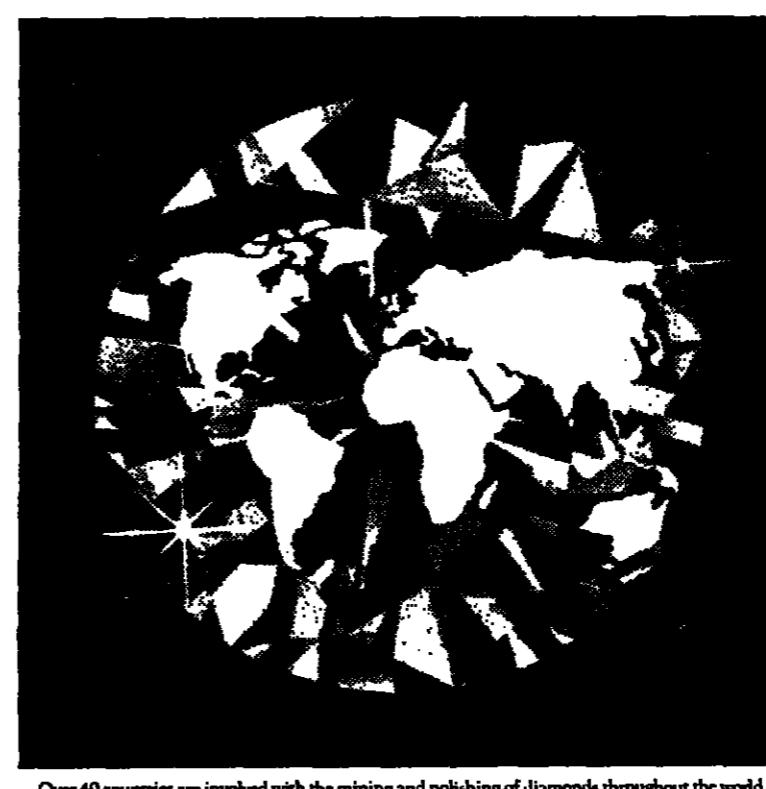
Pour être admis à l'assemblée, les propriétaires d'actions au porteur sont priés de déposer leurs actions cinq jours francs avant l'assemblée aux guichets de la Banque Internationale à Luxembourg S.A., 2, boulevard Royal, Luxembourg.

Le Conseil d'Administration

we remain entirely willing to carry large stocks to ensure — in the interests of the whole industry — that unsound trading and speculation does not arise again as it did in the late seventies.

Our Industrial Division had another satisfactory year with total sales reaching a new high and profits in dollar terms marginally ahead of 1985.

Production from De Beers' mines



Over 40 countries are involved with the mining and polishing of diamonds throughout the world.

and Debswana, which De Beers holds in equal partnership with the Government of Botswana, was 3 percent higher at 23,945,000 carats.

success is being achieved with the Pre-University Bursary Scheme for prospective black undergraduates. The purpose of this scheme, in line with our policy of merit-based

manning, is to help black graduates to qualify for management positions in the Group. We continue our substantial in-service training and educational schemes.

Last year I noted that the Government had announced and was in the process of implementing a number of reforms, and indeed its abolition of certain restrictions on black people constituted a significant movement toward greater racial equity which has materially eased their daily lives. These changes, however, were but part of the necessary process of

paving the way for properly representative negotiations on the country's constitutional future.

Over 40 countries are involved with the mining and polishing of diamonds throughout the world.

success is being achieved with the Pre-University Bursary Scheme for prospective black undergraduates. The purpose of this scheme, in line with our policy of merit-based

manning, is to help black graduates to qualify for management positions in the Group. We continue our substantial in-service training and educational schemes.

Last year I noted that the Government had announced and was in the process of implementing a number of reforms, and indeed its abolition of certain restrictions on black people constituted a significant movement toward greater racial equity which has materially eased their daily lives. These changes, however, were but part of the necessary process of

paving the way for properly representative negotiations on the country's constitutional future.

I had hoped that further initiatives would soon follow but that, alas, was not to be.

Abolition of apartheid

Campaigning for the election to be held in May for the White Chamber of Parliament suggests that a larger section of the electorate than had generally been expected has swung to the view — which we have long advocated — that Government must press ahead with the abolition of the remaining vestiges of apartheid in order that negotiations without pre-conditions — other than a cessation of violence — can begin on a constitution that will enable all South Africans to participate fairly and fully in the political process, that offers equal economic opportunity to all, and has an entrenched Bill of Rights. We must hope that the election will show that this view now has such an influential measure of support among white voters that it will materially facilitate and accelerate reform.

Diamond Congress

Last July a number of my colleagues and I attended part of the 23rd World Diamond Congress of diamond bourses and manufacturers in Tel Aviv, where we were able to renew old acquaintances with many of the leading personalities and meet the younger generation in the diamond business, all of whom had played their part in bringing the industry through its most difficult period for 50 years. It was appropriate that the congress should have been held in Israel which was the first centre to be hit, and perhaps the hardest hit, by the depression, and whose ingenuity contributed so much to the subsequent recovery. Israel and the other cutting centres, as well as the producers, may be sure that all of us in De Beers and the CSO will continue to play our full part in the maintenance of prosperity in the diamond business.

The full Chairman's Statement is contained in the Annual Report of the Company for the year ended 31 December 1986 which was posted to registered Shareholders on 29 April 1987.

De Beers Consolidated Mines Limited
Incorporated in the Republic of South Africa

London Office
40 Holborn Viaduct, London EC1P 1AJ.

De Beers



The London Season

Fortnum & Mason
Piccadilly, London W1

1987 International Film Festival
March 3 — Toronto, Ontario, Canada

March 4 — New York, New York, U.S.A.

March 5 — Paris, France

March 6 — Berlin, West Germany

March 7 — Amsterdam, The Netherlands

CURRENCY MARKETS

Dollar Mixed in Cautious Trading

Compiled by Our Staff From Dispatches

LONDON — The dollar closed mixed Wednesday in Europe as the widespread belief that the U.S. currency will continue to weaken overpowered an early short-covering rally.

Trading was relatively slow, however, as the Japanese markets were closed for a national holiday. Dealers added that with a string of market holidays later this week and next, dollar trading was likely to remain thin and volatile.

Dealers said that the dollar was unaffected by the U.S. Commerce Department's announcement that the nation's main forecasting measure of economic activity rose 0.4 percent in March.

"Nobody is looking at these kind of figures these days," said a dealer at a large West German bank in Frankfurt.

Dealers said that European trading revived in the early afternoon when U.S. dealers tried unsuccessfully to push the dollar below support levels of 141 yen and 1.80 Deutsche marks.

Although sentiment remained bearish for the U.S. currency, market participants were cautious amid uncertainty about U.S. credit and trade policies.

In London, the dollar closed at 1.7935 DM, slightly below Tues-

London Dollar Rates

Closes, 12:00 noon, London, April 29, 1987

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

Frac 1.4640

Sterling 1.6255

French Franc 5.9795

Swiss 1.3975

Dollar 1.7935

Yen 140.40

DM 1.7935

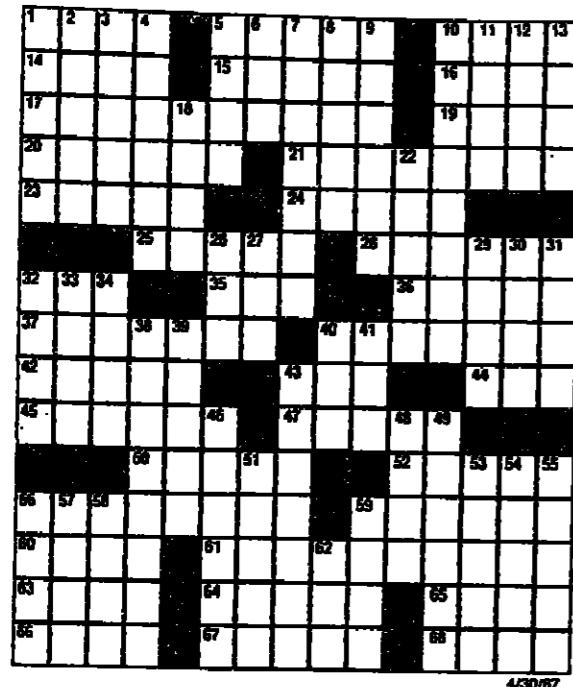
Frac 1.4640

Sterling 1.6255

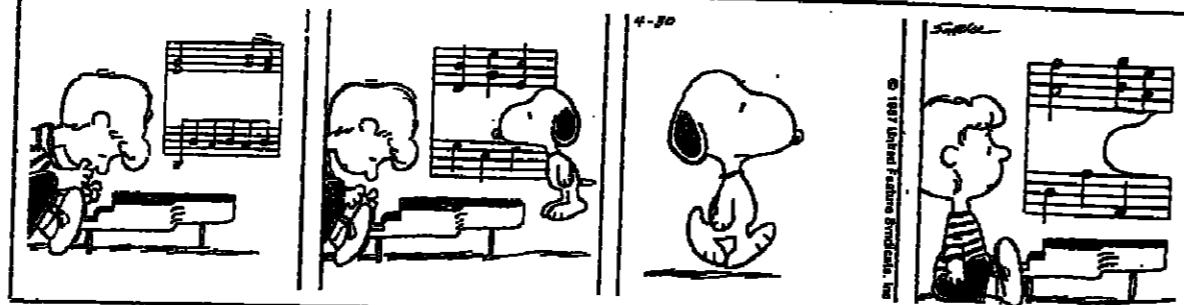
French Franc 5.9795

Swiss 1.3975

Dollar 1.7935



PEANUTS



ACROSS

1 Long feathery scars
5 Opposite the middle of a ship's side
10 Farewell, to Fabius
14 Italian currency
15 Mea — (my Lat.)
16 Author Ludwig
17 Creamy cocktails
19 Baker's flute
20 High-backed wooden bench
21 Low, light carriage
23 Cornered
24 Sheriff's action
25 Basketball shot
28 Warp-knitted fabric
32 Word with cake or meal
35 — Alamos
36 French school
37 S.C. university
40 Auction events
42 Songwriters' org.
43 Dropout
44 Little one
45 Son in an Arnold poem
47 Ire

50 Key
52 Bowling-alley button
56 Aromatic spice
59 Engaged man
60 Instigate
61 Dairy
63 Ticonderoga one
64 Furthermore: Lat.
65 Dutch cheese
66 Greek cheese
67 Color part
68 Crandall and Evans of baseball
69 DOWN
1 Explosion
2 Tex. athlete
3 Mountain ridge
4 Double trio
5 Anagram for cane
6 Kind of mite or moth
7 Cricket teams
8 "The cruellest month"
9 U.S.N.A. goat
10 Matador's move
11 Dart thrower
12 Caron role: 1953
13 A Fitzgerald
C New York Times, edited by Eugene Maleska.

DENNIS THE MENACE



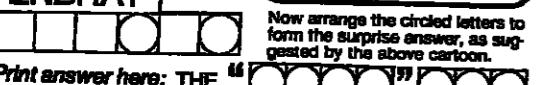
'SOMEBODY ELSE'S PANTS!'

JUMBLETM THAT SCRABBLED WORD GAME
Unscramble these four Jumbles, one letter to each square, to form four ordinary words.

QASUW



HECEK



NAHDEL



ENBRAY



Print answer here: THE

(Answers tomorrow)

Yesterday's Jumbles: HARRY PAGAN JOYOUS ATTACH
Answer: What they called this skid row gym — THE "PAUNCH" SHOP

WEATHER

EUROPE HIGH LOW

ASIA HIGH LOW

AFRICA HIGH LOW

LATIN AMERICA HIGH LOW

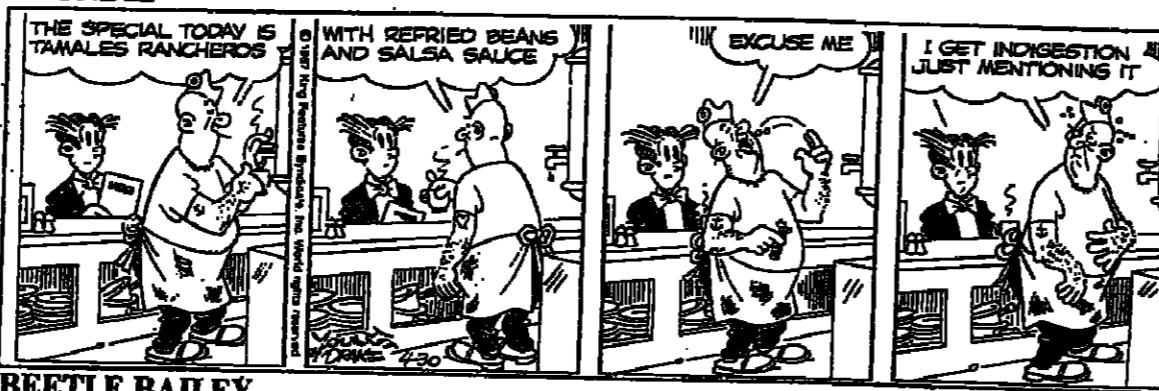
NORTH AMERICA HIGH LOW

MIDDLE EAST HIGH LOW

OCEANIA HIGH LOW

THURSDAY'S FORECAST — CHANNEL 1: Smooth, FRANKLIN: Cloudy, Temp. 22-7 (72-65). LONDON: Cloudy, Temp. 18-12 (64-54). NEW YORK: Partly cloudy, Temp. 17-11 (64-51). PARIS: Partly cloudy, Temp. 14 (71-57). ROMA: Partly cloudy, Temp. 22-9 (72-48). TEL AVIV: Not available. TEL AVIV: Thunderstorms, Temp. 34-25 (73-77). HONG KONG: Partly cloudy, Temp. 24-18 (71-65). TOKYO: Partly cloudy, Temp. 23-14 (72-57).

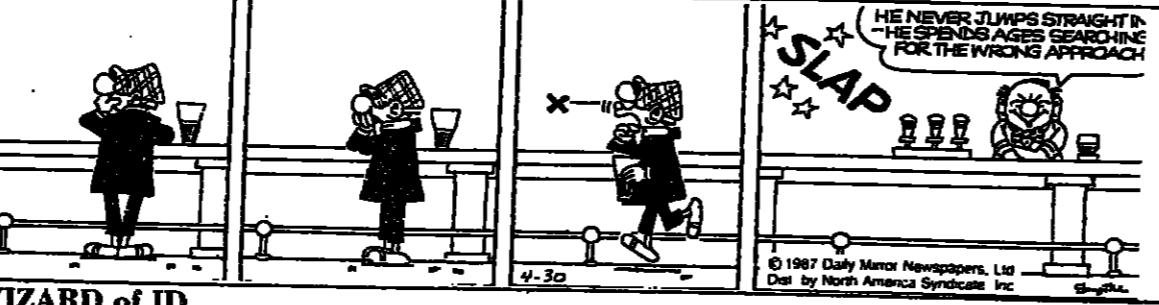
BLONDIE



BEETLE BAILEY



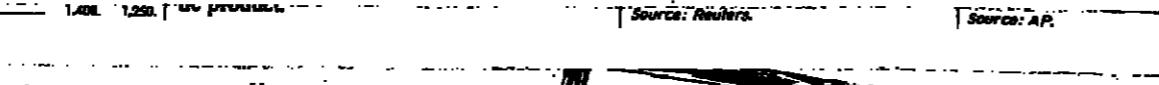
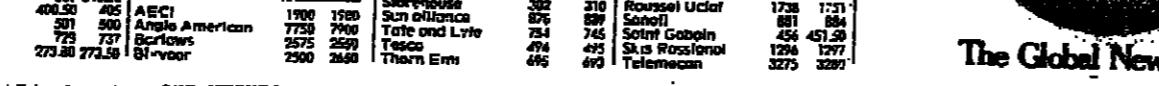
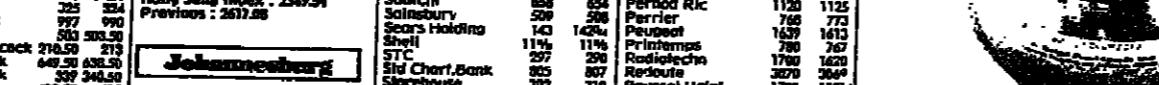
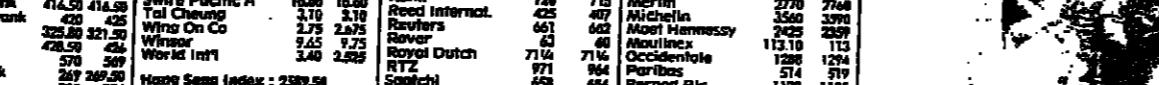
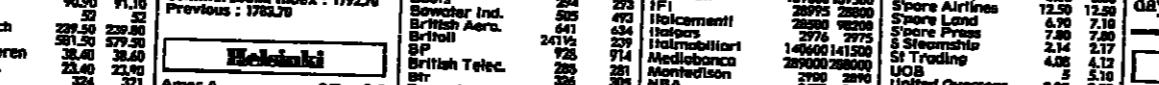
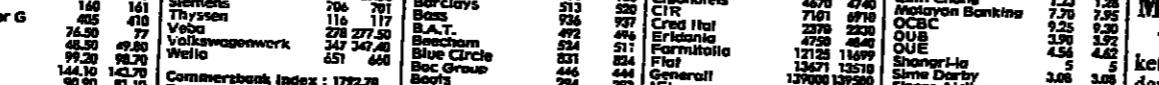
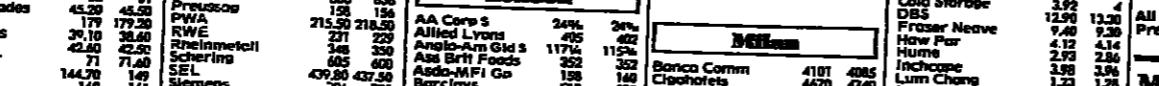
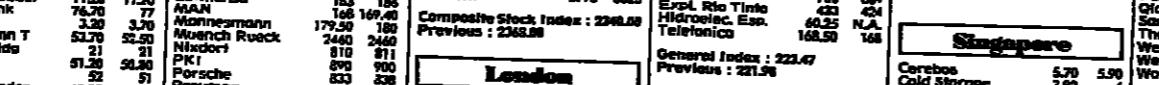
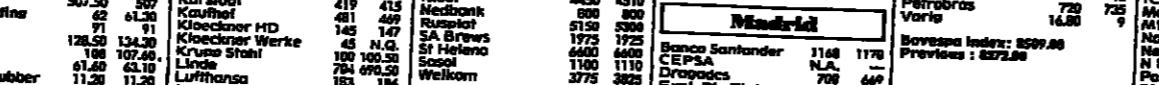
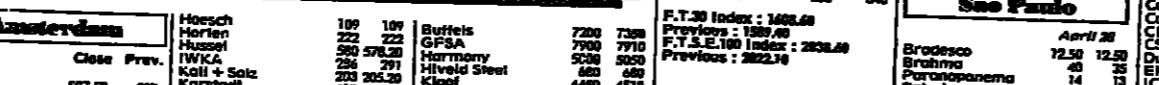
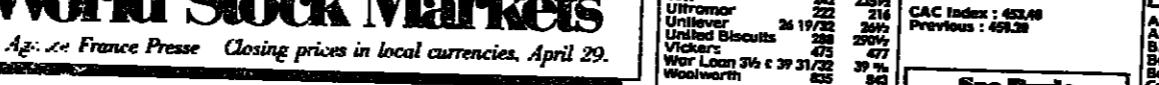
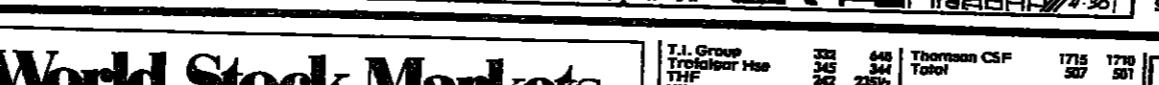
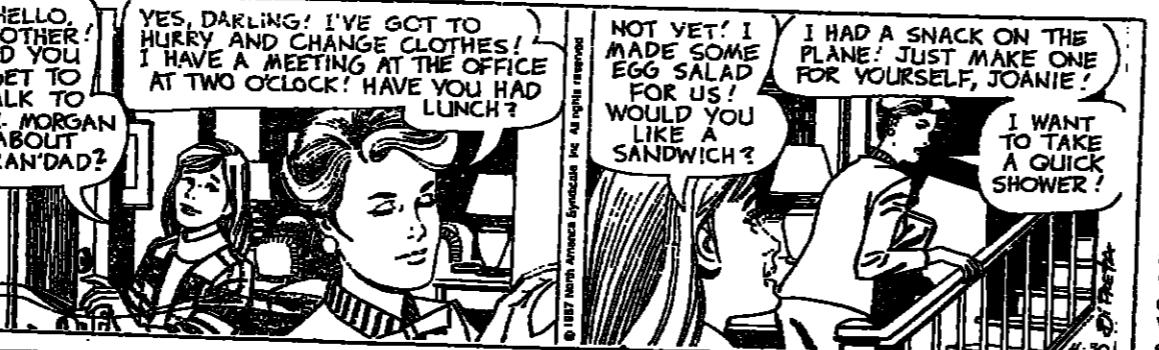
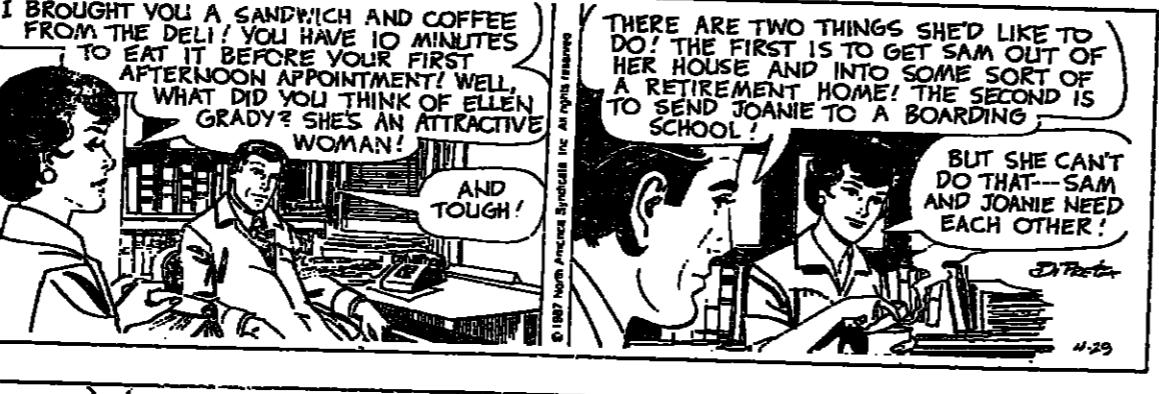
ANDY CAPP



WIZARD OF ID



REX MORGAN



SPORTS

Sonics' Ellis Scores 43 to Again Make His Point That the Mavericks Erred*The Associated Press*

SEATTLE — Dale Ellis continued Tuesday night to get even with the Dallas Mavericks, scoring a career-high 43 points as the underdog Seattle SuperSonics won, 117-107, to beat a 2-1 lead in their best-of-five playoff series.

Ellis, who spent most of his time on the bench in three unproductive seasons with the Mavericks, said, "I definitely want to beat them guys. I'm playing as hard as I can."

He also had 14 rebounds. In the series' second game, he got 32 points, winning it on two free throws with two seconds left. That's not completely vindicated yet, "he said. "There's still one more game."

The Mavericks beat the Sonics in all five games of the regular season, by an average of nearly 19 points. But, Ellis said, he is trying to convince his teammates "that we're as good as they are. Dallas is the only team that outplayed us during the regular season. All we wanted to do is get them in a close game."

He does not think he got a fair chance from the Mavericks' coach, Dick Motta, to play in Dallas.

"I don't think Dick Motta really

NBA PLAYOFFS

knew what he had in me," Ellis said. "He never really turned me loose to prove what I can do."

The Sonics took advantage of the Mavericks' 4-for-17 shooting in the first quarter to lead by as many as 22 points in the first half. They still had an 89-73 lead entering the fourth quarter, and the margin was 13 midway through the final period. But a 10-3 spurt by the Mavericks made it 109-103 with 1:18 left.

Then two free throws by Xavier McDaniel with 44 seconds left and one by Nate McMillan seven seconds later reduced the advantage to nine and settled the outcome.

The Mavericks' center, James Donaldson, who was bothered by a sore right leg, was held scoreless in 15 minutes and did not play in the second half. Mark Aguirre, the team's leading scorer, had strep throat and was held to 16 points.

Celtics 105, Bulls 94: In Chicago, Boston swept its series with the Bulls for the second straight season, and beat them for the 16th straight time, as Larry Bird got 32 points and 14 rebounds and Dennis Johnson had 24 points and 10 assists.

The Celtics played without all-star forward Kevin McHale, who had an ankle injury.

"We wanted to win this awful game. We needed the rest," Bird said.

"The rest is very crucial for us in the long run. Kevin is out and we can't do it," repeat as NBA champions.

Without him.

The Celtics trailed by nine in the third quarter, but Johnson's lay-up with 5:49 left in the game gave them an 82-81 edge. It was the first time they had led in the second half and they never trailed thereafter.

Bird scored the Celtics' next seven points as they went ahead by 89-83.

Rockets 117, Trail Blazers 106: In Houston, the home team lost all but six points of its 25-point lead at halftime but Akeem Olajuwon proved to be too much for Portland.

He had 35 points, 11 rebounds and 8 blocked shots, with a three-point play halting the Trail Blazers' rally.

After the Trail Blazers closed to six with 4:24 left, Olajuwon's basket, only the second for Houston in the last quarter, made it 105-97. He then sank the free throw, Robert Reid's short jumper with 3:29 to go made it 108-99 and the Trail Blazers never threatened again.

Photo: AP

Gary Roenick could not find the plate in the fifth before Bo Diaz of the Reds could find him, but the Braves still scored six runs with two out that inning and won, 7-2.

Derby Colt Momentum Bears 2 Burdens*By Andrew Beyer*
Washington Post Service

LOUISVILLE, Kentucky — Even those who had watched thoroughbred horse races all their lives had never seen anything like last fall's Hawthorne Juvenile Stakes.

The odds-on favorite, Momentum, had taken command of the race with a powerful move on the final turn as the announcer exclaimed, "There goes Momentum like a shot!" Racing in the middle of the track, the colt had opened a lead of several lengths, but in midstretch he swerved sharply to his left, straight at the inner rail.

Jockey Alex Solis bolted out just before his mount crashed through the railing. The horse had such momentum that it was airborne for a split second before smashing into a big pole and hitting the ground. The pole had been uprooted and splintered.

But then Momentum bounded to his feet, all his legs still attached. If it was improbable that he had survived the accident, it was more unlikely that he would race again. And it is incredible that he will run Saturday in the 113th Kentucky Derby.

"At Hawthorne," said trainer Wallace Dulisse, "they had moved the

starting gate with a tractor and parked it at the eighth pole, by the outside fence. He'd never seen that before, and he just shied away from the gate."

The ambulance took him off the track and back to his stall after the accident. He had an eight-inch (205-millimeter) gash on his right leg — you could see the canon bone — and he had to have 178 stitches to close it up. The vet had to sew up three different layers of skin. He broke four ribs, too, and we took him to the University of Illinois for surgery. One part of a rib had to be removed."

Before the accident, Dulisse was convinced that Momentum was going to be a star.

Now he had to start all over.

"Horses are creatures of habit; they don't reason like we do," Dulisse said. "When something bad happens to them, you have to help them get over it. Momentum went back in training 2½ months after the accident, and we did a lot of schooling with him around the starting gate. But when we ran him the first time at Santa Anita" in California, "he was there testing the waters, thinking, 'When is it going to happen? When's it going to happen?'"

Photo: AP

Momentum began to show a semblance of his old self when he next won a minor stake in northern California. But instead of letting him develop slowly, Dulisse put him on the fast track. He wasn't going to let 178 stitches and mental trauma interfere with dreams of the Kentucky Derby.

He shipped Momentum to the \$500,000 Jim Beam Stakes, where Momentum finished a distant fourth. Then he went to Keeneland for the Lexington Stakes, and was a soundly beaten third in a field of six.

Unfazed, Dulisse brought him to Churchill Downs for the most stressful horse race in America. "It was my plan all along to come to this race," he said. "I asked my wife, 'Am I crazy to run in the Derby at 75 to 1?'" She said no, and she's got strange intuitions."

Race horses are commonly ruined in two ways: by their own frailty and the normal stress of competition or by the people who manage them, who commit the cardinal error of pushing too far, too fast. Poor Momentum has had to suffer both ways.

Brewers Lose a 2d, To 4 Angel Homers*The Associated Press*

ANAHEIM, California — The Milwaukee Brewers lost Tuesday night for only the second time in 19 games this season, but this time they were routed as Doug DeCinces hit a three-run homer and Mike Diaz drove in two for the Padres.

Game 6, Cubs 2: In Chicago,

Mike Krukow, 30-game winner

last season, won his first in four decisions this season as San Francisco's Jeffrey Leonard hit a two-run

and Mike Diaz drove in two for the Padres.

Game 7, Phillies 1: In Philadel-

phia, Floyd Youmans struck out

six and allowed only three hits in

six innings, while hitting a solo-

home for Montreal. Andy McGa-

igan, with one-hit relief, extended

his streak of scoreless innings to 13.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

BASEBALL ROUNDUP

burgh, Bob Kipper held Los Angeles to seven hits for seven innings in outpitching Fernando Valenzuela. Junior Ortiz drove in three runs and Mike Diaz drove in two for the Padres.

Game 6, Cubs 2: In Chicago,

Mike Krukow, 30-game winner

last season, won his first in four decisions this season as San Francisco's Jeffrey Leonard hit a two-run

and Mike Diaz drove in two for the Padres.

Game 7, Phillies 1: In Philadel-

phia, Floyd Youmans struck out

six and allowed only three hits in

six innings, while hitting a solo-

home for Montreal. Andy McGa-

igan, with one-hit relief, extended

his streak of scoreless innings to 13.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

drove in three runs as Atlanta won

by scoring six runs with two out in

the fifth inning.

Braves 7, Reds 3: In Cincinnati,

Rafael Ramirez went four-for-five,

</

ART BUCHWALD

Ah, the Fees, the Fees

WASHINGTON — Two lawyers were talking to each other at the next table. One was wearing a fire chief's hat, so I assumed he worked for Texaco. The other was putting Pennzoil on his salad. The Pennzoil man said, "I feel like \$1 billion."

The Texaco man took a swig of wine and replied, "You don't have to rub it in. You know you'll never see the money. We've gone into bankruptcy."

"Great," said the Pennzoil man. "That means we're going to have to sue you for it. I was wondering how we were going to get some additional fees after the original suit was settled."

"We're counting on Pennzoil suing us. With that suit and our fees for bankruptcy, every partner in my law firm will be able to send his kid to college."

The Pennzoil man admonished, "Lawyers shouldn't become rich on litigation. Their job is to serve the client at the least possible cost."

"I'll drink to that," the Texaco man chuckled as he drank directly from the wine bottle.

"I wouldn't be too happy about the way things are going. My Pennzoil clients are talking about settling out of court. If that happens we can both sell our houses in Easthampton."

The Texaco man looked shocked. "You can't let them win out of court. That would make Pennzoil look chicken throughout the free oil world."

"If they want to settle I have no choice."

"If you don't sue us then we are



Buchwald

going to sue you," asserted the Texaco man. "We have a lifetime of legal work staring us in the face and we're not letting it go down the drain because you people will settle for less than \$1 billion to cover the pain and anguish Texaco caused us."

"On behalf of everyone in my firm I welcome your lawsuit and will set aside the next five years to take depositions."

"Good. We'll hire 20 more lawyers to work on the appeal just in case we lose in court," the Texaco man said. "Boy it's great to be on the losing side of a multibillion-dollar lawsuit."

The Pennzoil man retorted, "It's great to be on any side of a billion-dollar suit. What I would like to do is take this one to the Supreme Court. Then I could buy a new boat I've got my eye on."

"If we can take it to the Court of Appeals I'll be able to purchase that chalet in Aspen."

The Pennzoil man asked, "Suppose the judge throws the suit out of court because it has no merit. Where does that leave us?"

"We'll sue him."

"We can't sue a judge. But we can do the next best thing — fight the thousands of unhappy stockholders who are lined up ready to sue Texaco and Peenzoil for screwing up. We'll be in court until the year 2001," the Pennzoil man declared.

"You make it sound so good I think I'll buy a private airplane."

"There is an old saying in our profession: 'When you have a rich client, a private plane pays for itself.'

"We vinticulturists aren't op-

Vines vs. Fast Trains in Vouvray

By Steven Greenhouse
New York Times Service

VOUVRAY, France — It is the gentlest time of year here, as the Loire flows by at an escargot's pace and the sun nourishes the budding vineyards.

In recent years this tranquility has been shattered by a battle that has pitted old France, the enchanting land of vineyards and *chateaux*, against new France, the enterprising country that boasts of supersonic Concorde and high-speed trains.

The hostilities began a few years ago when the French national railroad system announced plans to build a new route for its Train à Grande Vitesse (TGV) through tiny Vouvray and its vineyards.

"There have been vineyards here for over 500 years," said Philippe Brisebarre, whose sun-drenched vineyard overlooks this town of 2,700, alongside the Loire. "You can't run the TGV through a spot like this."

France's railroad system, of course, disagreed, so Brisebarre and 150 other producers of Vouvray's red wine began a series of demonstrations: They picketed at Vouvray's tiny square, they protested at the railroad's headquarters, and they sat on the tracks to block trains going to nearby Tours, 150 miles (240 kilometers) southwest of Paris.

Vouvray's winegrowers have had more than the slogan of patrimony on their side. Under France's arcane wine laws, Vouvray's vines must be left untouched by all government construction unless the minister of

posed to progress." Alias said as far as he had been through his dank cave, which stores 60,000 bottles of Vouvray. "We're just opposed to progress when it clashes with the patrimony of wine," he said.

Railroad officials are quick to reply that France cannot live on patrimony alone. Indeed, forward-looking Frenchmen are proud of nothing so much as their TGV, which made its debut in 1981 and travels the 285 miles from Paris to Lyons in just two hours.

The even faster TGV planned for Paris to Tours via Vouvray, is part of a \$1.5 billion effort to bring high-speed train service to France's Atlantic Coast. Before heading on to Bordeaux, the TGV will cover the 150 miles from Paris to Tours in 56 minutes, a trip that now averages two hours. It is expected to hit the magical 300 kilometer per hour threshold, or 186 miles an hour.

Both President François Mitterrand, a socialist, and Prime Minister Jacques Chirac, a conservative, have hailed the idea of a TGV to the Atlantic. What is more, officials in Tours, a half-dozen miles from Vouvray, are pushing for the TGV because it will funnel more tourists into the Loire Valley.

Vouvray's winegrowers have had more than the slogan of patrimony on their side. Under France's arcane wine laws, Vouvray's vines must be left untouched by all government construction unless the minister of

agriculture and the National Institute of Wine Appellations, France's regulatory body for wine, grant an exception.

Not surprisingly, those oenophiles refused to allow the railroad to trample on Vouvray's vineyards.

Railroad officials decided to

build a tunnel which comes within 60 yards (55 meters) of some caves through one of Vouvray's hills.

But the winegrowers howled at this, too. They feared that the vibrations from the subterranean trains would damage the wine in the caves their wine-making ancestors dug into the hills.

The railroad has nevertheless plunged ahead with its tunnel. The railroad told the growers that the vibrations from the 30 trains that will pass each day, starting in 1990, will not hurt their wine. To reassure the growers, the railroad asked the regional laboratory of wine analysis to conduct a study on the vibrations' effect.

The laboratory has finished its report, but the railroad refuses to make it public. Railroad officials say the study found that the wine would be safe, but since the report is being kept under wraps, the winegrowers suspect the report concluded otherwise.

Seeking to assuage Vouvray's anxieties, the railroad has agreed to put an anti-vibration rubber cushion under the tracks in the tunnel.

For Brisebarre, whose caves are 100 yards from the tunnel, he remains nervous. "The railroad

says the vibrations won't be very

severe and won't hurt our wine," he said. "I don't usually agree with them, but this time I hope they're right."

The railroad has nevertheless plunged ahead with its tunnel. The railroad told the growers that the vibrations from the 30 trains that will pass each day, starting in 1990, will not hurt their wine. To reassure the growers, the railroad asked the regional laboratory of wine analysis to conduct a study on the vibrations' effect.

The laboratory has finished its report, but the railroad refuses to make it public. Railroad officials say the study found that the wine would be safe, but since the report is being kept under wraps, the winegrowers suspect the report concluded otherwise.

Seeking to assuage Vouvray's anxieties, the railroad has agreed to put an anti-vibration rubber cushion under the tracks in the tunnel.

For Brisebarre, whose caves are 100 yards from the tunnel, he remains nervous. "The railroad

says the vibrations won't be very

severe and won't hurt our wine," he said. "I don't usually agree with them, but this time I hope they're right."

PEOPLE

Baby for Woody & Mia

France and said Poland would publish the book by the Polish labor leader. Urban ridiculed what he called the "political campaign" surrounding the book's appearance in the West as "funny, just like some of Mr. Walesa's remarks are funny." The book's French-language edition went on sale Thursday.

Searchers in Maine found a human bone they say may prove two French aviation pioneers beat Charles Lindbergh across the Atlantic in 1927 — only to die in a crash in Maine. Crews Tuesday found a bone near the spot where the plane, the *L'Oiseau Blanc* (The White Bird), is believed to have gone down in May 1927, shortly before Charles Lindbergh's historic flight from New York to Paris. The White Bird was a large biplane that left France that May bound for New York. Charles Nungesser, the pilot, and François Coli, the navigator, were seeking the \$25,000 prize that Lindbergh collected just 12 days later from a French aeronautical society. Richard Gagnepain, director of the group searching for the plane, quoted the medical examiner, Dr. Karl Larser of East Machias, as saying the bone found Tuesday appeared to be a human tibia, or shin bone. He said the bone was cracked in a way that would indicate a hard shock at or after death. "He said the crack couldn't have happened in life because there was no sign of healing," Gillespie said. "He also said it appeared that the bone was quite old."

The Tate Gallery on Tuesday received a large cash donation that will enable it to pay \$2.9 million (about \$4.8 million) to buy a major painting by John Constable. The Clore Foundation, using the legacy of Sir Charles Clore, gave the art museum \$430,000 toward the purchase of the picture of the opening of Waterloo Bridge in 1817. The painting was offered to the museum by Betty Sheldon, who inherited it from the Masseys-Ferguson tractor family. If the appeal had failed the picture would have been auctioned and probably gone abroad. The museum had raised the rest of the money from other donors earlier.

Emperor Hirohito emerged from his usual seclusion Wednesday to greet thousands of cheering flag-waving Japanese in Tokyo as he celebrated his 86th birthday and 61st year on the throne. Accompanied by Empress Nagako, 84, and other family members, Hirohito made three 14-minute appearances, down from the usual four because of his age, to greet about 46,000 people.

Record Price for 'Minute' Red Diamond

By Sourou Melikian
International Herald Tribune

A RED diamond weighing slightly less than one carat was sold in New York Tuesday for \$880,000, or \$926,000 per carat, more than seven times the previous record per carat.

In the same sale, a "purple-pink" diamond weighing 0.59 carats was sold up to \$148,000, or \$251,000 per carat, paid by William Goldberg, a New York diamond wholesaler, for his private collection. The highest previous record for any diamond in any quality stood at \$127,000 per carat, paid in May 1980. The auction, at Christie's, totaled \$14.8 million.

The 0.92-carat red diamond, which came from a private estate in Montana, was purchased by Theodore Horovitz, a Swiss gem merchant; professional sources say the intended recipient is the Sultan of Brunei. The underbidder was Lisa Mousaieff of London Hilton Jewelers.

Concerning the red diamond, François Curiel, Christie's diamond expert and head of the jewelry department, thought, although he did not

say so in print, that it might go as high as \$250,000, less than one-third the price it realized. Curiel said afterwards: "I do not think that either the buyer or the underbidder knew themselves that they would be paying that price."

The red diamond is minute, smaller than a pea. When Curiel opened the bidding, Eddy Elias, an Antwerp-based dealer in color diamonds, shouted, "\$275,000." David Gol, another Geneva merchant, snapped back, "\$300,000." Laurence Graff of London took it up to \$320,000. At that point, Harry Winston jumped into the bidding and all four of them scrambled up to \$350,000. From then on it was a fight to the finish between Mousaieff and Horovitz.

These prices are on a level with the craziest figures offered in April at the Windsor sale. With a major difference: There was no Windsor glamour. These are market prices paid by hard-nosed professionals and, as such, of considerably greater significance to the future of the auction market.

Jerzy Urbas, the chief Polish government spokesman, on Tuesday criticized the publication of Lech Walesa's autobiography in

INTERNATIONAL CLASSIFIED

REAL ESTATE FOR SALE

REAL ESTATE TO RENT/SHARE

REAL ESTATE TO RENT/SHARE

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED

PARIS AREA FURNISHED